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RECORD, CASE No 14,356.

SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1893.

TERM No., 310

SAMUEL N. UFFORD AND CHARLES A. UFFORD, COPARTNERS AS SAMUEL N. UFFORD & SON, APPELLANTS,

vs.

CHARLES A. MORSS.

APPEAL FROM THE CIRCUIT COURT OF THE UNITED STATES FOR THE DISTRICT OF MASSACHUSETTS.

FILED OCTOBER 20, 1890.

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JUDD & DETWEILER, PRINTERS, WASHINGTON, D. C., MAY 18, 1893.

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1 UNITED STATES OF AMERICA, *Massachusetts District*, } *ss*:

At a circuit court of the United States for the first circuit, begun and holden at Boston, within and for the district of Massachusetts, on Saturday, the fifteenth day of October, in the year of our Lord one thousand eight hundred and eighty-seven, before the Honorable Le Baron B. Colt, circuit judge.

CHARLES A. MORSS, Complainant,
v.
SAMUEL N. UFFORD *et al.*, Defendants. } No. 2378. Equity.

The bill of complaint in this cause was filed in the clerk's office on the fifteenth day of March, A. D. 1887, and was duly entered at the October term of this court, A. D. 1886, and is in the words and figures following:

2 *Bill of Complaint.* (*Filed March* 15, 1887.)

To the honorable the judges of the circuit court of the United States in and for the district of Massachusetts:

Charles A. Morss, of Boston, in the Commonwealth of Massachusetts, and citizen of said Commonwealth, brings this his bill of complaint against Samuel N. Ufford and Charles A. Ufford, both of said Boston, and copartners in business, under the firm name and style of Samuel N. Ufford & Son.

And thereupon your orator complains and says:—

1. That John Hall, of Watertown, in said Commonwealth of Massachusetts, being the first and original inventor of certain new and useful improvements in adjustable dress forms, fully described in letters patent hereinafter mentioned, and which had not been known or used before his said invention, and which, at the time of his application for a patent, had not been for more than two years in public use or on sale; and being a citizen of the United States, upon due application therefor, on the twelfth day of October, A. D. 1880, he obtained letters patent of the United States, in due *form*, for the said invention, numbered 233,240, whereby there was granted to him and his legal representatives, for the term of seventeen years from the date thereof, the exclusive right of making,
2*a* using and vending to others to be used, the said invention and improvements described in said letters patent; and by virtue of said letters patent, the said John Hall became the sole owner of the said invention and improvements, which letters patent, or a true copy thereof, are ready to be produced in court.

And the complainant further says that said letters patent 233,240 were duly assigned to him by said John Hall, on the twenty-seventh day of April, 1886, duly recorded in the Patent Office of the United States on the first day of May, 1886, Liber R[34], page 119, and the

complainant is now the sole owner of said letters patent and of all rights thereby secured.

2. Your orator further shows that since the issue of said letters patent, the said John Hall and your orator have been put to great trouble and expense to cause the said invention to be embodied in articles of manufacture, and to be manufactured, sold and used, and made useful to the public, and your orator has been and is selling and manufacturing the same, and the said invention and letters patent are of great value to him.

3. Your orator further shows that the public, from the issue of said letters patent, have acquiesced in the rights of the patentee aforesaid, and fully conceded the same, and not in any way denied, disputed or infringed them to your orator's knowledge.

4. Yet the defendants, well knowing the premises, but contriving and intending to injure your orator, and to deprive him of the benefits and advantages which might and otherwise would have accrued to your orator from said letters patent, did, without his license or allowance, and against his will, and in violation of his rights, and infringement of said letters patent, wilfully, wrongfully and in defiance of his said rights, make, use and vend the said invention to others to be used, and did cause the same to be done, and did advertise and hold themselves out to the public as ready and desirous to make and sell to others to be used, articles of manufacture embodying and containing the said invention, secured to your orator as aforesaid; and they still continue to do all said acts, and although frequently requested by your orator to desist and refrain therefrom, yet they refused and still refuse so to do, but say they will continue to do the said acts.

3 5. Your orator further shows that the articles of manufacture made and sold by the defendants as aforesaid, contain the several devices set forth and claimed in the second claim of said letters patent, so as to operate as and for the purpose set forth in the complainant's letters patent, and being the same, or substantially the same, invention claimed in the said letters patent and secured to your orator as aforesaid.

6. Your orator further shows that the aforesaid acts of the defendants are all in defiance of the said rights of your orator, and to his great and irreparable injury, by which he has been and is still deprived of great gains and profits which he would otherwise have obtained, but which are being received and enjoyed by the defendants.

7. Your orator avers that the defendants have made a large number of articles, such as are referred to above, and sold and used the same, and have a large number on hand which they are using, but how many have been so made, sold or used, and how much profit the defendants have realized therefrom, your orator does not know, and he prays a discovery thereof.

8. Your orator prays a discovery of the particular manner in which the said acts have been carried on by the defendants, and that they may particularly and fully set forth how they have been

engaged in said business, and how long they have been engaged therein.

9. And forasmuch as your orator can have no adequate relief except in this court, to the end, therefore, that said defendants may, if they can, show why your orator should not have the relief hereby prayed for, and may upon their corporal oaths and according to their best and utmost knowledge, remembrance, information, and belief, full, true and perfect answer make to the premises, and may be compelled to account for and pay to your orator the profits by them acquired and the damage suffered by your orator from said unlawful acts; and that the said defendants and their servants, agents, workmen and attorneys may be enjoined and restrained by the order of this court from directly or indirectly making, using, vending, delivering, working or putting into practice, operation or use, or in any way counterfeiting or imitating the said invention, or
4 any part thereof, or any article made in accordance therewith, or like or similar to those which they have heretofore so made, used and sold; and that the said defendants may be decreed to pay the costs of this suit, and that your orator may have such further relief as to this honorable court shall seem proper and agreeable to equity: may it please your honors to grant unto your orator the writ of injunction issuing out of and under the seal of this honorable court, commanding, enjoining and restraining the said defendants and their servants, agents and attorneys, confederates and workmen, and each of them, as is hereinbefore prayed.

Also, may it please your honors to grant unto your orator the writ of subpœna issuing out of and under the seal of this honorable court, directed to the said defendants, commanding them, by a certain day and under a certain penalty, to be and appear in this court, then and there to answer the premises, and to stand to and abide such order and decree as may be against them.

And also may it please your honors to grant unto your orator a summons to said defendants, directing them to show cause, if any they have, why an injunction should not issue restraining and enjoining said defendants, their agents, attorneys, confederates and workmen, as above prayed for, during the pendency of this suit, and until a perpetual injunction shall issue, or other final decree be made in this cause.

CHARLES A. MORSS,
Per EVERETT MORSS, *Agent.*

CHAS. F. PERKINS,
Solicitor and of Counsel for Complainant,
82 *Devonshire Street, Boston.*

5 UNITED STATES OF AMERICA, }
Massachusetts District, } *ss:*

BOSTON, *March* 15, 1887.

Personally appeared Everett Morss, on behalf of the said Charles A. Morss, the complainant, and duly authorized to act for him herein, and made oath that he has read the above bill of complaint, and

that the same is true, except as to those things stated on information and belief, which he believes to be true.

Before me—

[SEAL.] ALEX. H. TROWBRIDGE,
Deputy Clerk U. S. Circuit Court, Massachusetts District.

At the said October term, the following answer and replication were filed:

Answer. (*Filed April* 29, 1887.)

Samuel N. Ufford and Charles A. Ufford, defendants, for answer to so much of the bill of complaint herein as they are advised, that it is material for them to answer, answering say:—

That they are informed and admit that letters patent of the United States, dated Oct. 12, 1880, and numbered 233,240, were issued to John Hall, but as to whether the complainant is now the sole owner of said patent by assignment, as alleged in said bill of complaint, they have no knowledge or information, and leave the complainant to such proof thereof as he may be advised.

They have no knowledge or information as to whether the complainant has been put to expense and trouble in manufacturing articles in conformity with said patent, or whether said patent is of great value to the complainant, and they leave the complainant to such proof of these matters as he may be advised.

They deny that the public have acquiesced in any alleged rights of the complainant, based upon said patent.

6 They deny that they have infringed upon or intend to infringe upon any of the exclusive rights purporting to be conveyed by said patent.

The defendants, further answering, say that they have sold adjustable dress forms, which they are informed and believe were, made in strict conformity with the following letters patent of the United States, by and with the consent and allowance of the respective patentees:—

Letters patent issued to William H. Knapp and Charles L. Knapp, Nov. 13, 1883, numbered 288,452.

Letters patent issued to William H. Knapp and Charles L. Knapp, Dec. 25, 1883, numbered 290,990.

Letters patent issued to William H. Knapp and Charles L. Knapp, Nov. 11, 1884, numbered 307,960.

The defendants, further answering, on information and belief, deny that said John Hall was the first and original inventor of the improvements in dress forms described and claimed in said letters patent, but aver that the same, or all substantial or material parts thereof were, long prior to any alleged invention thereof by said Hall, shown and described in the following letters patent of the United States, to wit:—

To C. W. Wilson, May 3, 1870, No. 102,638; to F. A. Balch, Sept. 17, 1867, No. 68831; to S. B. Ferris, Aug. 27, 1878, No. 207,351; to C. Franke, Sept. 7, 1875, No. 167,394.

The defendant, further answering, deny that any other matter or thing contained in said bill of complaint, and material for the defendants to make answer unto, is true, to the knowledge or belief of the defendants; and they pray to be hence dismissed with their costs.

SAMUEL N. UFFORD,
For the Defendants Individually, and for the Firm of S. N. Ufford & Son.

7 STATE OF MASSACHUSETTS, } ss:
County of Suffolk, }

Before me personally appeared Samuel N. Ufford, one of the defendants herein, and one of the partners in the firm of Samuel N. Ufford & Son, and made oath that the statements made in the foregoing answer, so far as made on his personal knowledge, are true; and so far as made on information and belief, he believes them to be true.

[SEAL.] JOHN F. BROWN,
Notary Public.

Replication. (*Filed May* 9, 1887.)

The replication of Charles A. Morss, complainant, to the answer of S. N. Ufford *et al.*, defendants.

This repliant, saving and reserving to himself, now and at all times hereafter, all and all manner of benefit and advantage of exception which may be had or taken to the manifold insufficiencies of the said answer, for replication thereunto says that he will aver, maintain and prove his bill of complaint to be true, certain and sufficient in the law to be answered unto, and that the said answer of the said defendants is uncertain, untrue and insufficient to be replied unto by this repliant; without this, that any other matter or thing whatsoever in the said answer contained, material or effectual in the law to be replied unto, and not herein and hereby well and sufficiently replied unto, confessed and avoided, traversed or denied, is true; all which matters and things this repliant is and will be ready to aver, maintain and prove, as this honorable court shall direct, and humbly prays as in and by his said bill he has already prayed.

CHAS. F. PERKINS,
Solicitor and of Counsel for Complainant.

8 This cause was thence continued from term to term to this present October term, A. D. 1887, when, publication of the testimony having passed in the clerk's office, the same is set down for hearing and fully heard by the court. On the twenty-third day of February, A. D. 1888, the opinion of the court is announced, and on the ninth day of April, A. D. 1888, the following decree is entered:

Final Decree. (*Entered April* 9, 1888.)

This cause came on to be heard at this present term upon the pleadings and proofs and was argued by counsel for the respective parties; and now, upon consideration thereof, to wit, April 9, 1888, it is ordered, adjudged, and decreed as follows, viz., that the letters patent referred to in the complainant's bill, being letters patent of the United States, granted unto John Hall for an adjustable dress form, numbered 233,240 and dated October 12, 1880, is a good and valid patent, and that the said John Hall was the original and first inventor of the improvement described and claimed therein, and that the said defendants have infringed the said patent and upon the exclusive rights of the complainant under the same.

And it appearing to the court that the complainant does not claim a reference to a master in this cause for the ascertain-
9–68 ing of the profits and damages accruing or arising from the aforesaid infringement, no reference for such purpose is made herein.

And it is further ordered, adjudged, and decreed that a perpetual injunction be issued against the defendants, according to the prayer of the bill.

And it is further ordered, adjudged, and decreed that the complainant recover of the defendants his costs of suit, and execution issue therefor.

By the court:

ALEX. H. TROWBRIDGE,
Deputy Clerk.

From this decree the defendants, on the ninth day of April, A. D. 1890, claimed an appeal to the Supreme Court of the United States and give good and sufficient security that they would prosecute their appeal to effect and answer all damages and costs if they should fail to make their plea good, and said appeal was allowed.

A true record.

Attest: JOHN G. STETSON, *Clerk.*

* * * * * * *

C. FRANKE.

Pantaloons-Former.

No. 167,393. Patented Sept. 7, 1875.

No. 310. Affordable p. 70. U. Mass.

Fig. I.

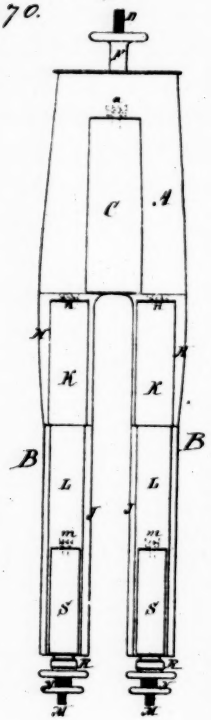
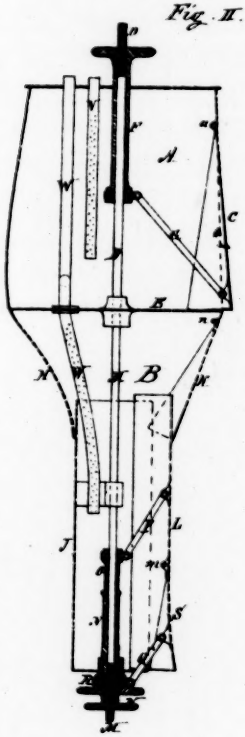


Fig. II.



Witnesses.

Isaac Aaron

A. M. Pethrad

Inventor.

Charles Franke

per Henry E. Reeder

Attorney

69 DEFENDANTS' EXHIBIT FRANKE PATENT (1), No. 167,393.

71 UNITED STATES PATENT OFFICE.

CHARLES FRANKE, of New York, N. Y.

Improvement in Pantaloons-formers.

Specification forming part of Letters Patent No. 167,393, dated September 7, 1875; application filed January 15, 1875.

To all whom it may concern:

Be it known that I, Charles Franke, of New York, in the State of New York, have invented a new and improved machine for shaping, steaming, and pressing pantaloons, of which the following is a specification:

The nature of my invention consists in the arrangement of a suitable frame or casing, with several sections, either loose or hinged together, and attached by means of rods to sleeves or nuts, screwed upon rods fixed to the frame, and whereby the loose or hinged sections of the frame may be forced outward. Perforated steam-pipes are arranged in the inside of the frame to heat every part of the same, and the frame or casing is likewise perforated to allow the steam to escape and penetrate the pantaloons stretched over the casing.

In the accompanying drawing, figure I represents on outside front view of the case, and Fig. II is a cross-section of the same.

(Here follows diagram marked p. 70.)

The frame or case represents the shape of the garment; and consists of three chambers, namely, A the upper chamber, corresponding to the body of the pantaloons, and B B the lower chambers corresponding to the shape of the legs. In the front of the chamber A a movable section, C, is arranged, hinged at its upper end *a* to the main part. D is a screw-rod, firmly attached to the plate E, which divides the chambers A and B B, upon which a sleeve or nut, F, is placed, connected through the rod G with the hinged section C. The upper part H of the chambers B is firmly attached to the chamber A, while the lower part J is made to slide into the part H, to enable the legs to be made longer or shorter, as may be desired. In the front of the upper part H a section, K, is hinged at its upper end *n*, and the front L of the lower part J is made loose, capable of being moved outward, and bearing against the hinged section K, so as to push said section K outward whenever this part L is moved outward. M is a rod, situate in the central part of the chambers B, and firmly attached to the plate E. This rod is provided with a screw-thread at its lower end, upon which a sleeve, N, is fitted, acting against a tube, O, sliding upon the rod M, and connected by means of the rod P with the loose front piece L in such a manner that, by the motion of the sleeve N on the screw part of the rod M, the front piece L will be moved outward, and, as said front piece L is in contact with the hinged section K in the upper part, this outward movement of the front piece L will press at the same time the hinged section K outward. The outer circumference of the sleeve N has a screw-thread cut on it, upon which a nut, R, is fitted, at-

tached by means of a rod, Q, to a hinged section, S. This section S forms the lower part of the front piece L, and is curved to correspond with the curved shape of the lower parts of the pantaloons. By the action of the nut R the lower part of this section S, which is hinged at *m* to the front piece L, can be moved outward when desired, to give the legs the required shape. V and W are steam-pipes entering the top of the chamber A. The pipe V extends downward into the chamber A till within a short distance of the plate E, and has fine perforations in its sides, while the end of said pipe is closed. The pipe W passes through the chamber A, and has branches passing through the plate E into each of the chambers B B, in which latter chambers the sides of the pipes are perforated, and pass about two-thirds of the distance downward.

All the sides, as well as the loose and hinged parts forming the frame or casing, are very finely perforated, to allow the escape of steam through the same, while the plate E, the top of the chamber A, and the bottom of the chambers B B are made solid and steam-tight. This frame or casing is inclosed with a linen or cotton cover, over which the pantaloons, after having been dyed, washed, or cleaned, are fastened, and a cover of some woolen or other heavy substance is then fastened tight over the pantaloons. By means of the sleeve or nut F the movable front part C in the chamber A is moved outward, so as to stretch the body of the pantaloons as much as possible, or as much as may be desired. The loose front part L in the chambers B B is then moved outward, as much as may be desired, by means of the sleeve N, tube O, and rod P, moving with it the hinged part K in the upper part of said chambers, after which the lower hinged part S is moved outward through the motion of the nut R and rod Q, by which above-mentioned outward
72 movement of the loose and hinged parts of the frame or casing the pantaloons stretched upon said frame may be shaped in any desired manner. Steam is then admitted into the chamber A and chambers B B, which will pass through the sides and saturate the pantaloons, which may then be stretched farther, if desirable. The outside woolen or heavy material confines the steam to the cloth of the pantaloons, and prevents the displacement or disarrangement of the nap or fibers of the material. After some time the steam is shut off, and the saturated pantaloons allowed to dry upon the frame, when the same are removed, and found pressed and shaped without the necessity of ironing.

What I claim as my invention, and desire to secure by letters patent, is—

The herein-described pantaloons-former, consisting of the chambers A and B B provided with hinged parts or sections C and K, loose front pieces L, with hinged bottom pieces S, rods G P Q, sleeves or nuts F N R, and rods D and M, the whole being combined and arranged to operate in the manner and for the purpose substantially as set forth.

CH. FRANKE.

Witnesses:
HENRY E. ROEDER.
ISAAC AARON.



C. FRANKE.

Apparatus for Shaping Coats.

No. 167,394. Patented Sept. 7, 1875.

Fig. I.

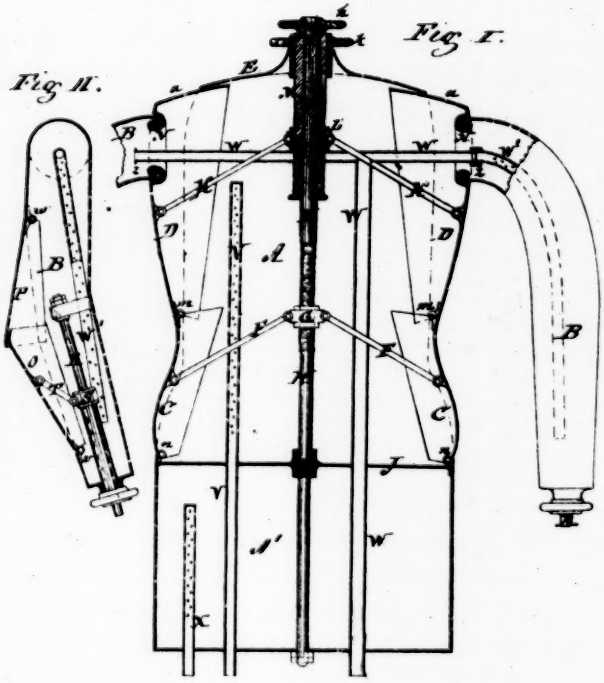


Fig. II.

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Witnesses.
Isaac Aaron
C. Schuler.

Inventor.
Charles Franke
per Henry E. Rader
attorney.

73 DEFENDANTS' EXHIBIT FRANKE PATENT (2), No. 167,394.

75 UNITED STATES PATENT OFFICE.

CHARLES FRANKE, of New York, N. Y.

Improvement in Apparatus for Shaping Coats.

Specification forming part of Letters Patent No. 167,394, dated September 7, 1875; application filed April 1, 1875.

To all whom it may concern:

Be it known that I, Charles Franke, of New York, in the State of New York, have invented a new and improved machine for steaming, shaping, and pressing coats, of which the following is a specification:

The nature of my invention consists in the arrangement of a suitable frame or casing made of metal and perforated, provided with sectional parts, hinged to the body of the casing, and attached by means of rods to sleeves or nuts, operated by screw-spindles, whereby these hinged sections of the frame can be forced outward to increase the circumference of the casing. To the main casing smaller casings are attached by means of suitable ball-joints to correspond with the coat-sleeves, and likewise provided with hinged sections, operated by a screw-rod, to increase the circumference of the same. Perforated steam-pipes are arranged in the inside of the main body and of the sleeve-casings to heat the same.

In the accompanying drawing—

(Here follows diagram marked p. 74.)

Figure I represents a vertical section of the machine embodying my invention. Fig. II is a side view of one of the sleeve-casings in section.

The case consists of three main parts—first, the main casing A, representing the shape of the upper part or body of the coat, and the two sleeve-casings B B, corresponding with the shape of the coat-sleeves. Below the casing A another case, A′, is arranged to accommodate the skirt of the coat. In the sides of the chamber A movable sections C and D are arranged. The section C is, at its lower part *n*, hinged to the casing A, while the section D is hinged to the upper part of the section C at *m*. The upper part of the section D is provided with a top or cap plate, *a*, fitting against the top plate E of the casing A, to prevent the escape of the steam when the sections are moved outward, and similar plates are arranged on the sides of these sections for the same purpose. The sections C are connected through rods F F to a nut, G, working upon a spindle, H, attached to the division-plate J, and operated by a wheel, *h*. By this arrangement these sections C C can be moved inward or outward by turning said spindle H, increasing or diminishing thereby the circumference

of that part of the casing A. The sections D are connected through rods K K to a nut, L, working upon the screwed part of a sleeve, M, placed over the spindle H, and operated by a wheel, *k*, by which arrangement these sections D D can be moved inward or outward by turning said sleeve M, increasing or diminishing thereby the circumference of this upper part of the case A. To the upper part of the sections D D the sleeve-cases B B are attached by means of suitable ball or socket joints N N, to allow said cases B to turn freely backward for the purpose of inserting or passing said cases into the sleeves of the coat. These cases B B are provided with sections O and P, hinged at *v* and *w* to the body of the case B, the section P overlapping the section O at a part corresponding with the elbow of the coat-sleeve. In the lower part of these cases B screw-rods R are arranged, operating nuts S, connected through the rods T with the sections O, (see Fig. II,) by which arrangement the sections O can be moved inward or outward. The outward motion of the section O pushes the section P likewise outward. V, W, and X are steam-pipes entering at the bottom of the main casing. The pipe X passes only into the lower casing A′ for the purpose of heating that part. The pipe V passes through the casing A′ into the casing A, in which latter part it is perforated for the purpose of heating and admitting the steam into that part of the case. The pipe W passes through the casing A′ and A, and is provided with branches at its upper end, leading into the sleeve-casings B B, where, near the socket-joints N N, the perforated pipes W′ W′ are connected to the same by means of suitable universal joints Z Z. These perforated pipes W′ W′ extend nearly to the end of the sleeve-casings B B, and admit the steam into those parts. All the sides, as well as the hinged sections of the frame or case, are very finely perforated, to allow the escape of steam through the same. This frame or casing is enclosed with a linen or cotton cover, over which the coat, after the same has been dyed, washed, or cleaned, is placed. The arm or sleeve cases B being moved backward, as above described, for the purpose of passing the same into the coat-sleeves, an outer cover of some woolen or other heavy substance is then fastened tight over the coat. The
76 hinged sections C D in the main body A of the case are then moved outward as much as may be required to stretch the body of the coat tight, and then the hinged parts O in the sleeve-casings B are moved outward to stretch the sleeves of the coat tight upon their casings, by which arrangement the coat, as well as its sleeves, will be stretched and shaped in any desired manner. Steam is then admitted into the several compartments forming the case, which will heat the same and pass through the sides, saturating the coat, which may then be stretched still further, if desirable. The outside woolen or other heavy material will confine the steam to the cloth of the coat and prevent the displacement or disarrangement of the nap or fibers of the material. After some time the steam is shut off, and the thus saturated coat is allowed to dry upon the frame or casing, and will then, when removed, be found pressed and shaped without any further necessity of ironing.

What I claim as my invention, and desire to secure by letters patent, is—

1. The herein-described frame or case, consisting of the chambers or casings A′ A and B B, of the proper form for shaping a coat, and provided with hinged sections C, D, O and P, in combination with rods F, K, and T, operated by spindles H R and sleeve M, together with suitable steam-pipes V, W, X, and W′, the whole being arranged to operate together in the manner and for the purpose substantially as set forth.

2. The sleeve-casings B B, attached to the hinged sections D by means of a ball or socket joint, N, substantially as and for the purpose described.

CHARLES FRANKE.

Witnesses:

HENRY E. ROEDER.
ISAAC AARON.

77 DEFENDANTS' EXHIBIT WILSON PATENT, No. 102,638.

79 UNITED STATES PATENT OFFICE.

CHARLES C. WILSON, of Baltimore, Maryland.

Improvement in Former for Hoop-skirts.

Specification forming part of Letters Patent No. 102,638, dated May 3, 1870; antedated April 18, 1870.

To all whom it may concern:

Be it known that I, Charles C. Wilson, of Baltimore, Maryland, have invented an improved adjustable form for hoop-skirts; and I do hereby declare that the following is a clear and exact description thereof, reference being had to the drawings making part of this specification, and to the letters of reference marked thereon.

In the drawings—

(Here follows diagram marked p. 78.)

Figure I is a side view, and Figs. II and III detail views, of parts of the same.

My invention consists in so constructing a form for the manufacture of hoop-skirts that it may be quickly and easily adjusted to enable any size or shape of skirt to be made upon it.

In construction I form my device of a shaft, B, firmly attached to the base-block or bottom of the form K at one of its ends, and having the other let into the band-block D, so that the waist or band block may revolve upon it.

I construct my waist-block of two separate parts, each part consisting of two pieces of wood of semicircular shape joined together, so that a portion of the lower part of one piece of the block will act as break-joints when the block is pushed open to increase the size of the waistband to be manufactured. These shoulders, together with a slide, M, on the top of the waist-block D, and rigidly attached to one half of it, keep the other half from working in its place. The slide M runs in a slotted piece of metal, T, attached to the other half of block, and is regulated by a thumb-screw, K′.

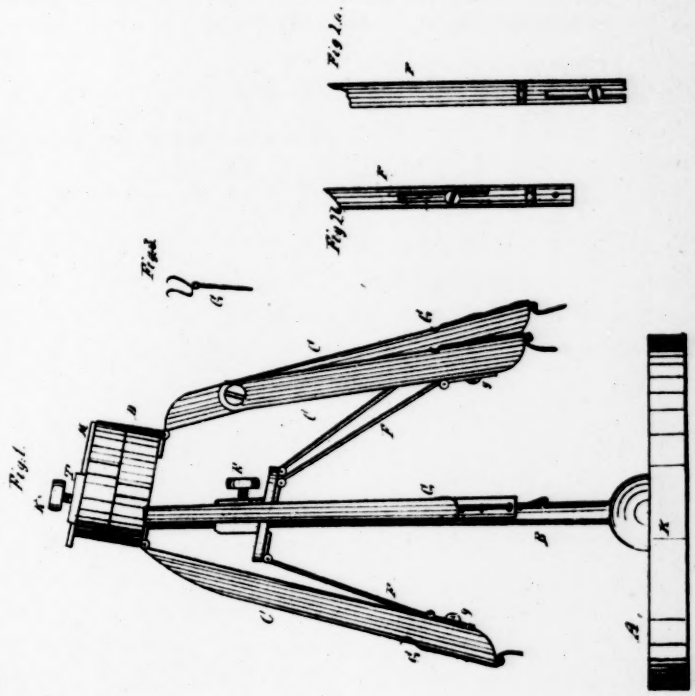
Hinged at their ends to the lower part of the circumference of the band-block D are the ribs C, as many as are necessary, and so hinged as to move in a direction from the center of the band-block outward. These ribs C are, near their lower ends, hinged to braces or strips F, which strips are hinged at their other or upper ends to a sleeve, E, sliding on the center shaft, B, and regulated by a thumb-screw through its neck. The strips F may either have slots in their ends where attached to their ribs at *g*, or may have slots in the center of them, in both cases regulated by a set-screw. Near the lower end of each rib I place a hook, G, with two prongs, attached

C. C. Wilson,

Hoop Skirt Machine.

No. 102638. Patented. May 3 1870.

No. 310
Ufford et al.
v.
Moses.
} p. 78.



Witnesses:
C. F. Clyde
H. Smith

Inventor.
C. C. Wilson

to a cord which runs down the rib through staples for guides until fastened by being wound around a screw in the end of the rib.

In operation the adjustable band-block may be drawn out to make any-sized waistband for skirts without its being necessary to increase the circumference of the bottom of the form, and by simply moving the sleeve E upon the shaft B up or down the size of the skirt is uniformly and evenly increased or diminished, while the relative position of such rib may be changed by the slot and screw at *g*, thus allowing every possible variation of size and shape to be made without loss of time.

The braces F, ribs C, and shaft B may be made out of either metal or wood, though wood is sufficiently strong and much cheaper.

Now, having described my invention, what I claim as new, and desire to secure by letters patent, is—

The combination of the hinged ribs C, adjustable waist-block D, sliding sleeve E, hinged and adjustable braces F, and shaft B, the parts being arranged and constructed as and for the purpose herein shown.

C. C. WILSON.

Witnesses:
R. F. HYDE.
EDM. F. BROWN.

80 & 81 DEFENDANTS' EXHIBIT EVERETT PATENT, No. 202,713.

83 UNITED STATES PATENT OFFICE.

GEORGE W. EVERETT, of New York, N. Y., assignor to himself and Byron D. Adams, of same place.

Improvement in Skirt-exhibitors.

Specification forming part of Letters Patent No. 202,713, dated April 23, 1878; application filed September 22, 1877.

To all whom it may concern:

Be it known that I, George W. Everett, of the city, county, and State of New York, have invented a new and improved skirt-holder, of which the following is a specification:

In the accompanying drawings—

(Here follows diagram marked p. 82.)

Figures 1 and 2 represent side elevations of my improved skirt-holder, showing it respectively in position for supporting the skirt and as folded up for being stored away.

Similar letters of reference indicate corresponding parts.

This invention is designed to furnish for ladies, dress-makers, dry-goods stores, and other places, an improved skirt holder or stand that may be readily put up for use, and conveniently folded together into narrow space for being packed into a trunk for traveling, or otherwise stored away.

The invention will first be described in connection with the drawings, and then pointed out in the claim.

Referring to the drawings, A represents a folding tripod or stand, which guides in an upper and lower sleeve, *a*, the center post or pillar B of my skirt-holder. The hinged legs *b* of the tripod are pivoted, in the usual manner, to the upper sleeve *a*, while the lower sleeve *a* is supported on short pivot arms or braces b^1, that extend from the sleeve to fixed clips or clamps b^2 of the legs *b*, and serve to lock the hinged legs in fixed position.

The center post B is rigidly secured by clamp-screws *d* to the sleeves *a*, and adjusted at any desired height, according to the length of the skirt to be supported.

The post B supports at the upper end a sectional head-piece, C, which is made either of a fixed and a movable section, or of two movable sections that are guided outwardly on a slotted horizontal arm, *c*, and adjusted thereon by clamp-screws *c'* to the size of the waist of the skirt.

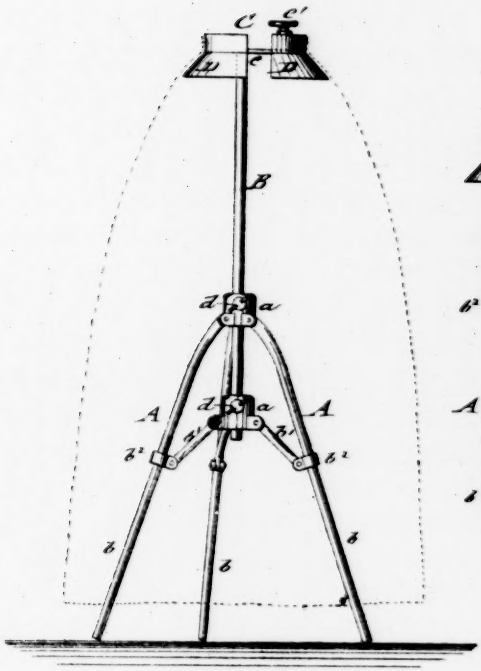
The head-piece C is provided with an outwardly-flaring flange, D, of brass or other suitable material, on which the waist of the skirt is supported, the skirt itself falling in natural folds from the same, and being by the use of the holder kept in better shape.

82

G. W. EVERETT.
Skirt-Exhibitor.

No. 202,713. Patented April 23, 1878.

Fig: 1.


C
C'
B
A
A
b
b
b

When the skirt-holder is to be packed into a trunk or stored away, the clamp-screws *d* are loosened, and the center post slid down in the same until the head-piece forms contact with the upper sleeve. The legs of the tripod are then folded up to the center post, and the device is thus brought within a convenient and compact space for packing, storing, and shipping, being thereby of great convenience to ladies in traveling, and for business purposes of all kinds, as skirts and dresses may be exhibited, and the holders folded up and stored away after use, without taking up a large space.

Having thus described my invention, I claim as new and desire to secure by letters patent—

A lady's skirt holder provided with an adjustable waist-block and retaining-flanges, as shown and described.

GEORGE W. EVERETT.

Witnesses:

C. SEDGWICK.
ALEX. F. ROBERTS.

84 & 85 DEFENDANTS' EXHIBIT FERRIS PATENT, No. 207,351.

87 UNITED STATES PATENT OFFICE.

SHERWOOD B. FERRIS, of Brooklyn, New York.

Improvement in Corset-exhibitors.

Specification forming part of Letters Patent No. 207,351, dated August 27, 1878; application filed January 21, 1878.

To all whom it may concern:

Be it known that I, Sherwood B. Ferris, of the city of Brooklyn, county of Kings, and State of New York, have invented a new and improved corset-stand, of which the following is a specification:

In the annexed drawings, forming part of this specification—

(Here follows diagram marked p. 86.)

Figure 1 is a front elevation, partly in section, of my improved corset-stand. Fig. 2 is a top view of the same. Fig. 3 is a front elevation of a modification of the same, and Fig. 4 a top view of the modified stand.

Similar letters of reference indicate corresponding parts in all the figures.

This invention relates to a new corset form or dummy for displaying corsets in show-windows and other places, and for holding them properly in shape for the display for their exact outline and construction.

The stand is composed of a central stem, upon which are placed two boards—the upper heart-shaped, and the lower nearly circular form. These boards are vertically adjustable on the stem, and may be connected by adjustable tapes, or by umbrella-like frame-work, so as to give body to the corset which is placed around them.

The invention also consists in further details of improvement, hereinafter more fully set out.

The letter A in the drawings represents the base-plate or foot of the corset-stand. From the same projects an upright stem or shaft, B, which extends through, and upon which are placed two horizontal boards, C and D. These boards are placed between pins *a b*, that pass through holes in the stem B, and the distance between the boards C D may consequently be varied at pleasure, in conformity with the length of corset to be displayed. For a shorter corset the boards are brought closer together than for a longer one, and the stem B is provided with a series of holes, if necessary, for different positions of the pins *a b*, to allow the adjustment of the boards referred to. The outer ends of these two boards C D may be connected by tapes *d d*, each tape being loose at one end, so that it may be stretched after the corset is applied, to cause it to bear against the inner side of the corset; or a frame-work, *e*, constructed of umbrella-

S. B. FERRIS.
Corset-Exhibitor.

No. 207,351 Patented Aug. 27, 1878.

No. 310.
Ufford et al.
v.
Morse.
} p. 86

Fig: 1



Fig: 2

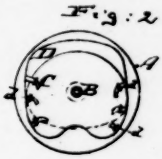


Fig: 3

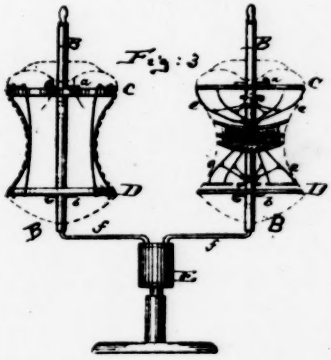
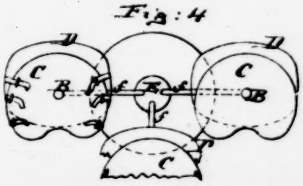


Fig: 4



Witnesses:
John C. Tumbridge
T. B. Hosher

Inventor:
S. B. Ferris
by his attorney
A. V. Briesen

like ribs and braces, or equivalent devices, may be placed between the boards C D, so that when stretched or spread laterally such frame-work *e* will bear against the inner side of the corset that is placed around the boards, and tend to impart to it the requisite fullness.

The corset is placed around the two boards in manner clearly indicated in the drawing, the upper board being heart-shaped to fit the bosom-gores, and the lower being of a flattened circular form, to give the desired outline to the lower part of the corset. The tapes, when stretched, or the frame-work *e*, when extended, will, by bearing against the inner side of the corset, give fullness to the same.

The stem B, instead of being affixed to the board A, may, as in Fig. 3, be secured by a horizontal arm, *f*, to another stem, E, and the same stem E may, by this arrangement, be made to carry three or more stems, B, as indicated in Figs. 3 and 4.

One stem, B, may, if desired, carry more than one set of boards C D, so as to display, if desired, two or more corsets, one above the other.

I claim—

1. The corset-stand composed of the central stem, B, and of the boards C D, shaped to conform to the corset, substantially as herein shown and described.

2. The combination of the boards C D and central stem B with the inner distending tapes or frame, substantially as herein shown and described.

SHERWOOD B. FERRIS.

Witnesses:

A. v. BRIESEN.
T. B. MOSHER.

88 & 89 DEFENDANTS' EXHIBIT BALCH PATENT, No. 68831.

91 UNITED STATES PATENT OFFICE.

F. A. BALCH, of Hingham, Wisconsin.

Letters Patent No. 68831, dated September 17, 1867.

Improvement in Reel.

The schedule referred to in these letters patent and making part of the same.

To all whom it may concern;

Be it known that I, F. A. Balch, of Hingham, in the county of Sheboygan, and State of Wisconsin, have invented a new and useful improvement in swifts or reels; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

(Here follows diagram marked p. 90.)

Figure 1 is an elevation of my reel, showing the arms fully expanded.

Figure 2 is a plan of the same.

Figure 3 is a plan of the top of the sliding-head, showing the worm-thread thereon.

My invention mainly consists in constructing the arms of my reel with parallel bars, so that as the head of each arm is carried to a point more or less near to the central shaft, said head will always continue parallel with said central shaft.

That others may understand the construction and mode of operation of this reel, I will particularly describe it.

A is the shaft upon which the reel is mounted. It is provided at its lower end with a clamping device, by which it may be secured to the edge of a table or some other convenient object. The head B is secured to the shaft A, but in such a manner that it may turn freely thereon without rising up or falling down. In the edge of the block B are cut four notches, more or less, and within each of said notches are pivoted the arms C D. At the opposite ends of the arms C D are also pivoted the winding blades E E. A line passing through the pivots connecting the arms C D to the head B is exactly parallel with a similar line passing through the pivots connecting said arms to the winding-blade E, so that the effective lengths of the arms C D are equal, and if the winding-blade is raised up, it will move in the arc of a circle, and will constantly maintain its relative position to the shaft A; *i. e.*, the face of the blade E will always be parallel with the shaft A, and always in position to receive the strands of yarn to be wound upon it.

Below the head B is the sliding-head F, which is connected to the

90

No. 310.
Affordeal
v.
Moses.

Pg. 9a.

F. A. Balch,
Reel.

No. 68,831. Patented, Sept. 17. 1867.



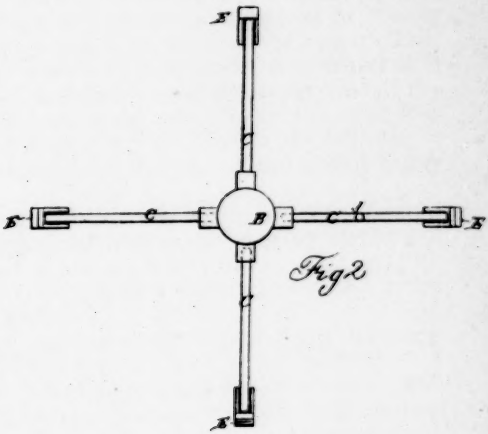


Fig 2



Fig 3



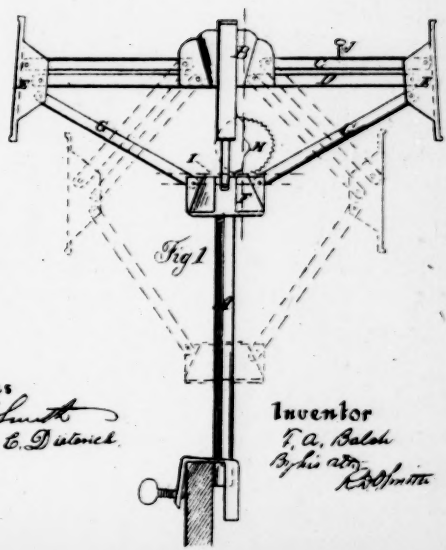


Fig 1



Witnesses
A. Schmitt
Philip C. Dieterich

Inventor
F. A. Balch
By his atty
R. Schmitt

blades E E by the rods G G, and by it the position of the blades E is determined. That is to say, the blades E may be set at a greater or less distance from the central shaft, and so that a greater or less length of yarn will be required to pass once around the reel. Some convenient device may be used to retain the sliding-head F at the desired point.

Affixed to the shaft A is the toothed wheel H, which turns upon a central pivot in proper bearings. This wheel has a pin projecting from one of its sides, which, once during each revolution, comes in contact with some device which will produce a sound, as by raising up a spring, which will make a quick sound when released. This device is well known and its purpose understood. The wheel H is actuated by the worm-thread I, formed upon the upper side of the head F, and brought in gear with the same when the head F is raised to its highest point, as shown in Fig. 1. The pin J furnishes a convenient point of attachment for the end of the thread before commencing to wind.

It will appear evident that with this reel skeins of large or small length may be made with equal facility, as the winding-blades will be always in proper position to receive the yarn.

Having described my invention, what I claim as new, and desire to secure by letters patent, is—

1. The parallel bars C D, to connect the head B and winding-blade E of a reel, substantially as and for the purpose set forth.

2. The head B and blade E, connected by the parallel bars C and D, substantially as set forth, in combination with the sliding-head F and connecting-rods G, for the purpose of retaining the winding-blades more or less distended, as desired.

F. A. BALCH.

Witnesses:

JNO. E. THOMAS.
CHAS. CHAMBERLIN.

92 & 93 DEFENDANTS' EXHIBIT KNAPP PATENT, No. 307,960.

95 UNITED STATES PATENT OFFICE.

WILLIAM H. KNAPP, of New Haven, Connecticut, assignor of one-half to Chas. L. Knapp, of same place.

Garment-stand.

Specification forming part of Letters Patent No. 307,960, dated November 11, 1884. Application filed April 10, 1884. (No model.)

To all whom it may concern:

Be it known that I, William H. Knapp, of New Haven, in the county of Now Haven and State of Connecticut, have invented a new improvement in garment-stands; and I do hereby declare the following, when taken in connection with accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

(Here follows diagram marked p. 94.)

Figure 1, a vertical section; Fig. 2, a transverse section directly under the handle *e*, looking downward; Fig. 3, a sectional top view showing the collar *n* and the waist-segments; Fig. 4, a front view of the stand complete; Fig. 5, a transverse section through the skirt portion above the collar I, looking down; Fig. 6, a perspective view of one of the links detached.

This invention relates to an improvement in skeleton forms used for exhibiting wearing-apparel, commonly called "garment-stands," and especially to such as are constructed for the exhibition of ladies' garments; and it embodies to some extent the inventions for which letters patent Nos. 288,452 and 290,990 were granted to me, the object of the invention being to make the frame adjustable to various sizes throughout, and also to avoid the employment of springs in making such adjustment as in my previous patents; and the invention consists in the construction, as hereinafter described, and more particularly recited in the claims.

A represents a tubular post supported on a base or feet, B.

C is the central spindle upon which the mechanism is arranged. This spindle extends down into the post A, and so as to rest upon a stop, *a*, and may be secured to prevent its turning by a set-screw, *b*. This spindle extends to the extreme top, where it is provided with a conveniently-shaped handle, *d*, by which it may be turned. Near the upper end a sleeve, D, is arranged upon the spindle free to be rotated, and provided with a suitable handle, *e*, by which the sleeve may be turned upon the spindle as its axis. Upon this sleeve is a collar, *f*, loose, so as to permit the sleeve to be turned within it, but

(No Model.)

W. H. KNAPP.

GARMENT STAND.

No. 307,960. Patented Nov. 11, 1884.

No. 310.
Uffendell v. Morse. } p. 94.

Fig 1



Fig 4



Fig 2

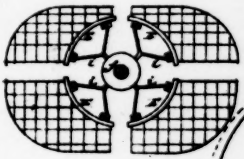


Fig 3

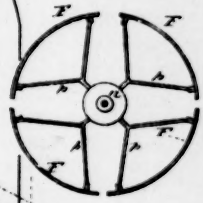


Fig 5

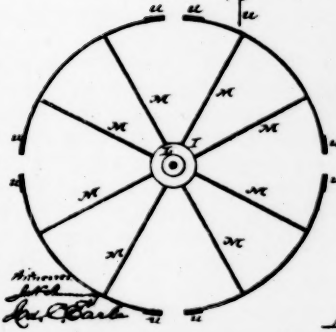


Fig 6



Witnesses
[illegible]
[illegible] Clarke

Wm. H. Knapp Inventor
By atty
Wm. E. Hale

prevented from vertical movement by the collar *e* above. At the lower end the sleeve is screw-threaded, as at *g*, and on this threaded portion is a collar, *h*, correspondingly threaded.

The neck-piece, as in my previous patents, is composed of several segment-shaped pieces, E, represented as four in number. To each of these segments a link, *i*, is hinged extending up to the collar *f*, to which its upper end is also hinged. To the segments like links *l* are hinged, which extend down to the collar *h*, and to which their lower end is hinged, as seen in Fig. 1. These links are bifurcated or V shape, the apex being hinged to the collars, and the two ends hinged to the segments, as seen in Fig. 2. The neck end of the wires forming the waist portion of the standard are attached to these segments, as shown, and as in my previous patent, and so that the body portion of the frame is divided into four sections vertically. Now, if the sleeve D be turned in one direction to draw the collar G upward, it follows that the links *l* will force the neck-segments away from the center, as indicated in broken lines, Fig. 1, and thereby expand the neck, or, turned in the opposite direction, contract the neck. The waistband is formed of four segments, F, corresponding to the four segments of the neck, as seen in Fig. 3, and the wires of the waist portion extend from the segments at the top to the respective segments in the waist-line, and secured thereto so as to move with their respective segments in expanding and contracting. Near the waist-section a sleeve, G, is arranged, fixed to the spindle, so as to revolve with it, the sleeve screw-threaded at its lower end. This sleeve may be made a permanent part of the spindle; but it is made in sleeve shape, as being the cheaper construction. It is fixed to the spindle by a pin, *m*, or otherwise. Above this sleeve is a collar, *n*, loose, so as to permit the spindle to revolve within it, but fixed as to its longitudinal movement by means of a collar, *o*, above, which is made fast to the spindle, as shown. To each of the segments F a link, *p*, is hinged, extending to the collar *n* above, to which the upper end is hinged, and
96 to the segments other links, *r*, are hinged, extending down to a collar, *s*, on the screw-threaded portion *t* of the sleeve G, the collar being correspondingly screw-threaded, and so that if the spindle be turned—say, as by means of the handle *d*—the screw-threaded portion *t* will also revolve, and in such revolution will cause the collar *s* to rise or fall according to the direction in which the screw is turned. In one direction it will cause the collar to rise, as seen in broken lines, drawing the two collars nearer together, and thereby forcing the segments outward—that is, expanding the waistband, as seen in broken lines, Fig. 1. From the waist-line downward the skirt part of the frame is divided into four parts corresponding to the four waist-segments, each of the parts made from wire, as seen in Fig. 4. From the waist downward at the edge of each of these sections is a vertical strip, *u*. On the spindle within the skirt portion is a collar, I, free to revolve, but fixed as to vertical movement by a collar, L, above, which collar is made fast to the spindle. From this collar I links or arms M extend to the vertical bands *u*, the links hinged to the bands, as also to the collar I,

as seen in Figs. 1 and 5. As the collar *s* rises to expand the waist-segments F, it necessarily causes those segments to rise, as seen in broken lines, and in so rising the skirt portions are drawn up with those segments, and in such rising the links M are turned upward, as seen in broken lines, which turning throws their lower end outward, and thereby causes the skirt portion to expand accordingly, as indicated in broken lines, Fig 1.

To unite the skirt-sections, and yet permit such expansion and contraction of them, a toggle-connection, N, is made, as seen in Fig. 4, one link of the toggle attached to one of the vertical strips, *u*, and the other link to the other strip, and so that as the sections expand the toggle approaches a straight line, and in contracting the two links approach each other, as indicated in broken lines, Fig. 4. Under this construction the springs employed in my previous patents are avoided, as the means for expansion and contraction are made positive by the two screws.

The links by which the segments are connected to their respective collars are made in a single piece, so as to be produced in malleable iron. One of these links is seen detached in Fig. 6. They are made of V shape, the apex and the two ends terminating so as to form an eye for the pintle of the hinge, as shown. This makes a cheap, strong, and durable link, and holds the segments firmer than when a single link or spring is employed, as in my previous patents, the V shape giving to them a brace-like effect.

That part of the present invention by which the neck and waist are adjusted may be employed in forms of waist-shape only—that is, forms in which the skirt is not desirable, such as used for male clothing.

I claim—

1. The combination of the central spindle, C, collar *n*, loose on said spindle, but fixed as to vertical movement, the screw-thread *t*, attached to or made a part of said spindle, the collar *s* on said screw-threaded portion, the waist-segments F, to which the corresponding divisions of the waist-frame are attached, links *p* and *r*, connecting said segments, respectively, with said collars *n s*, the collar I below the waist, loose on the spindle, but fixed as to vertical movement, with links M, extending therefrom into hinge-connection with the skirt portions, which said skirt portions are attached to the respective waist-segments, substantially as described.

2. The combination of the central spindle, C, collar *n*, loose on said spindle, but fixed as to vertical movement, the screw-thread *t*, attached to or made a part of said spindle, the collar *s* on said screw-threaded portion, the waist-segments F, to which the corresponding divisions of the waist-frame are attached, links *p* and *r*, connecting said segments, respectively, with said collars *n s*, the collar I below the waist, loose on the spindle, but fixed as to vertical movement, with links M, extending therefrom into hinge-connection with the skirt portions, which said skirt portions are attached to the respective waist-segments, and toggles N, connecting said skirt portions, substantially as described.

3. The combination of the neck-segments E E, the corresponding

waist portions of the frame attached thereto, the vertical central spindle, C, the sleeve D, loose thereon, and constructed with the screw-thread *g*, the collar *f* loose upon said sleeve, the collar *h* on the screw-threaded portion *g*, the links *i* and *l*, connecting said segments with the respective collars, the waist-segments F, collar *n*, loose on the spindle, but fixed as to vertical movement, the collar *s*, screw-threaded corresponding to the screw-thread *t* on the spindle, and link-connections *p r* between said waist-segments and the respective collars *n s*, substantially as described.

4. In a garment-stand consisting of horizontal segments around the vertical central rod, the said segments supporting the wires which form the stand, combined with an adjustable collar on the central rod, with the V-shaped links, the apices of which are hinged to the collar, the two arms of each extending one to near one end and the other to near the opposite end of said segments and hinged thereto, substantially as described.

WM. H. KNAPP.

Witnesses:

JOS. C. EARLE.
J. H. SHUMWAY.

97 DEFENDANTS' EXHIBIT HALL FILE-WRAPPER AND CONTENTS. Francis K. Beach, Notary Public.

Circuit Court of the United States, District of Massachusetts. In Equity.

CHARLES A. MORSS
v.
SAMUEL N. UFFORD *et al.* } No. 2378.

Agreement.

It is consented by counsel for the respective parties to the above-entitled case that the copy of file-wrapper and contents hereto attached be admitted in evidence in said suit with the same force and effect as though duly certified by the Commissioner of Patents.

CHAS. F. PERKINS,
Counsel for Complainant.
JOHN DANE, JR.,
For Defendants.

98 DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE.

To all persons to whom these presents shall come, Greeting:

This is to certify that the annexed is a true copy from the files of this office of the file-wrapper and contents in the matter of the letters patent granted John Hall, October 12, 1880, No. 233,240, for improvement in adjustable dress form.

In testimony whereof I, Benton J. Hall, Commissioner of Patents, have caused the seal of the Patent Office to be affixed this 16th day of June, in the year of our Lord one thousand eight hundred and eighty-seven, and of the Independence of the United States the one hundred and eleventh.

BENTON J. HALL,
Commissioner.

BOSTON, *Jan'y* 22, 1880.

Hon. Commissioner of Patents.

SIR: Enclosed find ch'k for $15, fee in app'n for pat. by John Hall for imp't in dress form. Model, spec., & draw. in box per express.

Very respectfully,

HENRY W. WILLIAMS, *His Att'y.*

99 To the Commissioner of Patents:

Your petitioner, John Hall, a citizen of the United States, residing at Watertown, in the county of Middlesex and State of Massachusetts, prays that letters patent may be granted to him for the improvement in adjustable dress forms set forth in the an-

nexed specification; and he hereby appoint- Henry W. Williams, of the city of Boston, State of Massachusetts, his attorney, with full power of substitution and revocation, to prosecute this application, to make alterations and amendments therein, to receive the patent, and to transact all business in the Patent Office connected therewith.

JOHN HALL.

To all whom it may concern:

Be it known that I, John Hall, of Watertown, in the county of Middlesex and State of Massachusetts, have invented a new and useful dress form, of which the following is a specification:

My invention relates to improvements in dress forms, by means of which every part of the device is rendered adjustable, so that it may be applied to a dress of any size or style and fill it out perfectly, in order that trimming may be placed upon it, etc. The mechanism for accomplishing this result is illustrated in the accompanying drawings, in which—

Fig. 1 is a side elevation of a dress-form embodying my invention. Fig. 2 is a vertical section of the same. Fig. 3 is a horizontal section on line *x y*, Fig. 2. Fig. 4 is an enlarged sectional view of a portion of the dress form detached. Similar letters of reference refer to similar parts throughout the several views. *a* is a pole or standard, supported in a pedestal, *b*, of ordinary construction. This pole or standard is designed to support and entire dress form, which is made, however, in two distinct parts, which I will designate as the skirt form and waist form. The principle of the invention is the same in both.

In the skirt form *c c* are upright ribs, made preferably of thin, springy material, held toward the standard *a* by means of elastic fabric *d d*, one band being placed near the bottom of the skirt and one near the hip portion. These elastic bands are secured to each rib. Instead of fabric, spiral spring wire may be used, although fabric is deemed more efficient and economical.

e e are braces or stretchers whose inner ends are hinged to the sliding block *f* and whose outer ends are hinged to the ribs *c c*. *e' e' e'* are braces whose inner ends are hinged to the block *f* and whose outer ends are hinged to slides *g g g*, placed upon the two side ribs and one rear or trail rib *c c c*. Each brace e^1 is provided with a hook, *k*, adapted to drop into one of several holes *k'* (Fig. 4) made at intervals in its corresponding rib. The block *f* slides upon the rest or support, *h*, provided with a set-screw, h^3. To spread the lower part of the skirt-form, loosen the set-screw h^3, raise the rest *h*, which pushes up the sliding block *f* and lifts the inner ends of the braces *e e*, thus spreading the skirt ribs *c c* and adjusting set-screw h^3. To adjust a particular rib independently of the others, move the slide *g* (see Fig. 4) up or down to force the rib in or out, and drop the hook *k* into the desired hole. The present style of skirt requires the side ribs to be placed in, and the rear or trail-rib out, a little. To contract the skirt form, loosen the set-screw h^3, and the band *d* will force the ribs in and the block *f* and rest *h* down. At the hip portion of the skirt form two sets of braces, e^2 e^2, hinged

to sliding blocks f^1 f^2 below and above and to the ribs *c c*, are provided. Rests h^1 h^2, similar to rest *h*, are placed above and below the sliding blocks, and the rests, blocks, and braces operate in manner exactly similar to those connected with the lower portion of the skirt form. Thus the hip portion may be enlarged or contracted, as desired.

In the waist form elastic bands *m* are placed at the neck and lower extremity around the ribs, which, however, depend quite largely upon their own elasticity for contraction. The side ribs *l l* are jointed at the shoulders and are supplied with a pair of long braces or stretchers *n n*, so as to admit of great expansion. The breast ribs l^1 l^1 have nearly as long ones and the other ribs, l^2, have shorter ones. The braces *n n* are all connected with slides *o o* and with sliding blocks *p p'*. A neck block, *s*, having set-screw *s'*, lies above the sliding block *p'*. To place and adjust the waist form after the skirt form has been adjusted, push the waist form down until the sliding block *p* rests upon the rest h^2, then with the neck block *s* press the sliding block *p'* until the waist ribs have sufficiently spread. The side and breast ribs *l l'*, having the longest braces *n*, will expand the most, and the others in proportion; then set the screw *s'*. I usually attach the upper ends of the breast ribs and the corresponding rear ribs to the upper part of the side or shoulder ribs, such part being lettered l^3 in Fig. I and forming the shoulder.

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Thus it will be seen that provision is made for different sizes, proportions, and heights, as well as for changing fashions in dress. The waist and skirt may be used separately, if desired, the former being capable of displaying vests, etc.

Having thus fully described my invention, what I claim and desire to secure by letters patent is—

Cancelled per am'd't March 31, '80.

1. A dress form consisting essentially of a central standard, one or more series of adjustable ribs, and corresponding series of braces or stretchers hinged to one or more runners or sliding blocks upon said standard and having their outer ends connected with said ribs, whereby the dress form may be expanded and contracted, substantially as and for the purpose set forth.

2. In combination with the standard *a*, rest *h*, sliding block *f*, and braces *e*, the ribs *c* and elastic band *d*, substantially as and for the purpose described.

1. [3]* In combination with the sliding block *f*, upon the standard *a* and brace *e'*, the slide *g*, hook *k*, and rib *c*, having openings *k'* therein for the purpose of causing such rib to be adjusted independently of the rest of the series, substantially as specified.

103

Words and sentences enclosed between rules erased in copy.
* Figure enclosed in brackets erased in copy.

2. [4]* In combination with the standard *a* and ribs *c*, the double braces c^2, sliding blocks f' f^2, and rests h' h^2, substantially as and for the purpose set forth.

3. [5]* In combination with the standard *a*, sliding blocks *p* p', and neck blocks *s*, the ribs *l* l' l^2 and double braces *n* of various lengths attached to said ribs by the slides *o*, substantially as and for the purposes above described.

4. [6]* In combination with the standard *a* and braces *n*, the jointed side or shoulder ribs *l l*, substantially as and for the purpose specified.

JOHN HALL.

Witnesses:
HENRY W. WILLIAMS.
GEORGE V. MALLON.

STATE OF MASSACHUSETTS, }
County of Suffolk, } ss:

John Hall, the above-named petitioner, being duly sworn, deposes and says that he verily believes himself to be the original and first inventor of the improvement in adjustable dress forms described and claimed in the foregoing specification; that he does not know and does not believe that the same was ever before known or used; that the invention described and claimed in the foregoing specification has not been patented to him nor with his knowledge or consent in any foreign country, and that he is a citizen of
104 the United States and a resident of Watertown, in the county of Middlesex and State of Massachusetts.

JOHN HALL.

Sworn to and subscribed before me this twenty-second day of January, 1880.

HENRY W. WILLIAMS,
Justice of the Peace.

Room No. 25.

DEPARTMENT OF THE INTERIOR,
U. S. PATENT OFFICE,
WASHINGTON, D. C., *March* 18, 1880.

John Hall, care Henry W. Williams, 258 Washington St., Boston, Mass.

Adjustable dress forms. Filed Jan. 24, 1880. S. No. 1343.

This application has been examined.

The first claim is rejected on patents 202,713, Everett, April 23, 1878, and 207,351, Ferris, Aug. 27, 1878 (both in dummies and hangers).

There is no novelty in the elements of the second claim, in view

* Figures enclosed in brackets erased in copy.

of the above patents in connection with the elastic band shown in 75864, Keffer, March 17, 1868 (blocking and stretching hats), which band is there used in the same way and for the same purpose as in applicant's device.

J. L. FREEMAN, *Ex.*

W. L. A.

105 Issue division. (2-024.) Serial No. —. 2

All communications should be addressed to "The Commissioner of Patents, Washington, D. C."

DEPARTMENT OF THE INTERIOR,
U. S. PATENT OFFICE,
WASHINGTON, D. C., *Apr.* 12, 1880.

John Hall, care Henry W. Williams, 258 Washington St., Boston, Mass.

SIR: Your application for a patent for an improvement in adjustable dress forms, filed Jan. 24, 1880, has been examined and allowed.

The final fee, twenty dollars, must be paid and the letters patent bear date as of a day not later than six months from the time of this present notice of allowance.

If the final fee is not paid within that period the patent will be withheld, and your only relief will be by a renewal of the application, with additional fees, under the provisions of section 4897, Revised Statutes. The office aims to deliver patents upon the day of their date and on which their term begins to run, but to do this properly applicants will be expected to pay their final fees at least twenty days prior to the conclusion of the six months allowed them by law. The printing, photo-lithographing, and engrossing of the several patent parts preparatory to final signing and sealing will consume the intervening time, and such work will not be done until after payment of the necessary fees.

106 When you send the final fee you will also send, distinctly and plainly written, the name of the inventor and title of invention as above given, date of allowance (which is the date of this circular), date of filing, and, if assigned, the names of the assignees.

If you desire to have the patent issued to assignees, an assignment containing a request to that effect, together with the fee for recording the same, must be filed in this office on or before the date of payment of final fee.

Additional copies of specifications and drawings will be charged for at the following rates: Single copies, uncertified, 25 cents; twenty copies or more, 10 cents each. The money should accompany the order.

Very respectfully,

H. E. PAINE,
Commissioner of Patents.

The within title is that given by the examiner in charge as most appropriate to your invention. Should you desire a change in the same, satisfactory reasons must be given therefor on or before the payment of the final fee.

In remitting the final fee give the serial number at the head of this notice.

107 BOSTON, *Sept.* 21, 1880.

Hon. Commissioner of Patents.

SIR: Enclosed find ch'k for twenty dolls., for which please issue patent to John Hall, Watertown, Mass., for imp't in adjustable dress forms.

Case filed Jan'y 24, 1880; allowed April 12, 1880. Serial No. 1343.

Please send patent to my care.

Very respectfully,

HENRY W. WILLIAMS, *His Att'y.*

(R'm 25.)

BOSTON, *March* 29, 1880.

To the Hon. Commissioner of Patents.

SIR: In the matter of my application for letters patent for an imp't in adjustable dress forms, 1343, filed Jan'y 24, 1880, I hereby amend my specification by striking out the first and second claims and numbering the remaining claims "1, 2, 3, 4."

Very respectfully, JOHN HALL,

By his att'y, HENRY W. WILLIAMS.

108 1343. 1880.

No. 233,240. $\frac{55}{273}$.

Received in room 25, March 12, '80. Freeman.

John Hall,
Of Watertown,
County of Middlesex,
State of Massachusetts.
Adjustable dress forms.

Rec'd Jan. 24, 1880, petition, affidavit, specification, drawing, and model.

Cert. dep., —.
1. Cash, $15, Jan. 24, 1880.
Add'l fee cert., —.
1. " " cash, $20, Sept. 23, 1880.
2. Examined, April 9, 1880. Freeman.
Issue, April 12, 1880. Arthur W. Crossley.
Patented Oct. 12, 1880.
3. Circular, Apr. 12th, 1880.

HENRY W. WILLIAMS,
258 *Washington St., Boston, Mass.*

1880.

Contents.

Application papers.
March 18, 1880, rejection.
46. Advertising.
Dummies & hangers.
Title: Improvement in adjustable dress forms.
M. H.; M. L. W.

(MEMORANDUM.—The specification and drawing of U. S. letters patent No. 233,240, to John Hall, for adjustable dress form-, dated October 12, 1880, is here inserted as a part of this exhibit, but said letters patent being already incorporated in this record as Complainant's Exhibit A, the same is not here reproduced.—John G. Stetson, clerk.)

109 The following is the opinion of the court in accordance with which the decree was entered April 9, 1887, in favor of the complainant:

Circuit Court of the United States, District of Massachusetts. In Equity.

CHARLES A. MORSS
v.
SAMUEL N. UFFORD *et al.* } No. 2378.

Opinion of the Court. (*February* 23, 1888.)

COLT, *J.*:

The complainant is the owner of letters patent 233,240, dated October 12, 1880, issued to John Hall for improvements in dress forms. The invention relates to improvements "by means of which every part of the device is rendered adjustable, so that it may be applied to a dress of any size or style and fill it out perfectly in order that trimming may be placed upon it."

The patent describes both a waist form and a skirt form. The present suit is confined to the skirt form. The skirt form shows a series of upright ribs corresponding in general outline to the skirt of a lady's dress, surrounding a standard. The form is suspended from the outer ends of several series of braces, the inner ends of the braces being provided with adjusting mechanism for adjusting them up or down on a central standard, and thereby contract or expand the entire form, or by adjusting one or more sets of braces to contract or expand the form at different points. The defendants are charged with infringement of the second claim of the patent, which is as follows: "In combination with the standard *a*
110 and ribs *c*, the double braces c^2, sliding blocks f^1 f^2, and rests h^1 h^2, substantially as and for the purpose set forth." This claim describes the hip portion of the skirt. In defendants' form there is a standard like Hall's, and surrounding ribs designed to impart shape to a dress, and so arranged as to be adjustable through

their entire length. In the upper or hip portion of the form there are found the series of double or oppositely inclined braces such as are seen in the Hall patent. Claim 2 is made up of a combination of five elements and it is apparent that defendents' form has the standard, the ribs or their equivalent, and the double braces of the Hall patent. The question of infringement turns upon whether the defendants' form contains the sliding blocks f^1 f^2 and the rests h^1 h^2. In place of the upper sliding block and rest the defendants have a collar which is fixed to the standard, and in place of the lower sliding block and rest they have substituted a nut and threaded standard. The outer ends of the braces are hinged to this fixed collar instead of to a sliding block and the inner ends of the braces are hinged to the nut in place of a sliding block. I am satisfied that these adjusting devices are substantially the equivalent of each other.

A nut and threaded standard for adjusting the inner ends of hinged braces was a known equivalent for a sliding block and rest. This is shown by the patent granted Charles Franke, September 7, 1875. So the fixed collar in defendants' form must be considered the equivalent of the Hall block and rest. Assuming the upper rest in the Hall device to be provided with a thumb screw, so as to enable it to be adjusted vertically on the standard, still when once it is fixed it does not differ from the fixed collar of the defendants' device. I regard this change made by the defendants as a formal one. Confining ourselves strictly to the second claim of the patent, it seems to me clear that the defendants' de-
111 vice is an infringement of this claim. There is nothing in the prior state of the art as exhibited in the record which can be called an anticipation of the Hall patent though each of the elements of the second claim with the exception, perhaps, of the ribs, is found to be old. I am of opinion that complainant is entitled to a decree, and it is so ordered.

Decree for complainant.

112 *Clerk's Certificate.*

UNITED STATES OF AMERICA, } *ss:*
Massachusetts District, }

I, John G. Stetson, clerk of the circuit court of the United States within and for the first circuit and district of Massachusetts, certify that the foregoing is a true copy of the record of said circuit court in the cause in equity, entitled No. 2378, Charles A. Morss, complainant, *v.* Samuel N. Ufford *et al.*, defendants, lately determined in said circuit court, and of all proceedings therein, and of the opinion of the court filed therein.

In testimony whereof I hereunto set my hand and affix the seal of said circuit court, at Boston, in said district, this first day of October, in the year of our Lord one thousand eight hundred and ninety, and of the Independence of the United States the one hundred and fifteenth.

Seal of the Circuit Court, Massachusetts.

JOHN G. STETSON, *Clerk.*

113 Circuit Court of the United States, District of Massachusetts.

CHARLES A. MORSS
v.
SAMUEL N. UFFORD & SON. } Bond for Damages and Costs.

Know all men by these presents that we, William H. Knapp, of Brooklyn, New York, and Charles L. Knapp, of Brooklyn, State of New York, are held and firmly bound unto the above-named Charles A. Morss in the sum of two hundred and fifty dollars, to be paid to the said Charles A. Morss; for the payment of which, well and truly to be made, we bind ourselves and each of us, our and each of our successors, heirs, executors, and administrators, jointly and severally, firmly by the- presents.

Sealed with our seals and dated the first day of April, in the year of our Lord one thousand eight hundred and ninety.

Whereas the above-named Samuel N. Ufford and Son have prosecuted an appeal to the Supreme Court of the United States to reverse the decree rendered in the above-entitled suit by the judge of the circuit court of the United States for the district of Massachusetts:

Now, therefore, the condition of this obligation is such that if the above-named Samuel N. Ufford and Son shall prosecute their said appeal to effect and answer all damages and costs if they fail
114 to make the same good, then this obligation shall be void; otherwise the same shall be and remain in full force and virtue.

WILLIAM H. KNAPP. [L. S.]
CHARLES L. KNAPP. [L. S.]

Sealed and delivered and taken and acknowledged this 1st day of April, 1890, before me—

JOHN A. SHIELDS,
U. S. Commissioner, S. D. N. Y.

Approved as to form and security.

CHARLES F. PERKINS,
Att'y & Sol'r for Complainant.

115 *Citation.*

The United States of America to Charles A. Morss, of Boston, in the district of Massachusetts, Greeting:

You are hereby cited and admonished to be and appear at a Supreme Court of the United States, to be holden at Washington on the second Monday of October next, pursuant to an appeal claimed and allowed by the circuit court of the United States for the district of Massachusetts in a cause in equity, wherein Samuel N. Ufford and Charles A. Ufford, of said Boston, are defendants and appellants and you are complainant and appellee, to show cause, if any there be, why the decree rendered against the said defendants

should not be reversed and why speedy justice should not be done to the parties in that behalf.

Witness the Honorable Le Baron B. Colt, circuit judge, this eighth day of April, in the year of our Lord one thousand eight hundred and ninety.

LE BARON B. COLT,
U. S. Circuit Judge, First Judicial Circuit.

SUFFOLK, *ss:*

BOSTON, *June 13th*, 1890.

Service of the above accepted.

CHAS. F. PERKINS,
Sol. for Complainant, Chas. A. Morss.

116 Supreme Court of the United States, October Term, 1893.

SAMUEL N. UFFORD *et al.*, Appellants,
vs.
CHARLES A. MORSS. } No. 310.

It is stipulated and agreed between counsel for the respective parties that the clerk in printing the record in this cause may omit the testimony and complainant's exhibits, said testimony and exhibits being a part of the record in case of Knapp *et al. v.* Morss, No. 55 of this term. It is also agreed that cause No. 310 may be advanced and argued as one case with No. 55, when that case is reached, and that the testimony and exhibits in either record shall be considered and referred to with the same force and effect as if printed in both records.

Dated at New Haven, Conn., May 16, 1893.

JOHN DANE, JR.,
Counsel for Appellants in No. 310.
JOHN K. BEACH,
Counsel for Appellants in No. 55.
PAYSON E. TUCKER,
Counsel for Appellee in Nos. 310 & 55.

117 [Endorsed:] Case No. 14,356. Supreme Court U. S., October term, 1893. Term No., 310. Samuel N. Ufford *et al.*, &c., appellants, *vs.* Charles A. Morss. Stipulation to omit parts of record in printing, to advance this cause to be heard with No. 55 as one case, and to use evidence in both cases. Filed May 17, 1893.

Endorsed on cover: Case No. 14,356. Massachusetts C. C. U. S. No. 310. Samuel N. Ufford and Charles A. Ufford, copartners as Samuel N. Ufford & Son, appellants, *vs.* Charles A. Morss. Filed October 20, 1890.

150-221

Office Supreme Court U. S.
FILED.
OCT 24 1893
JAMES H. McKENNEY,
CLERK.

SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1893.

SAMUEL N. UFFORD ET AL.,
Appellants,
vs.
CHARLES A. MORSS
AND
WILLIAM H. KNAPP ET AL.,
Appellants,
vs.
CHARLES A. MORSS.

No. 310.

No. 35.

BRIEF FOR APPELLANTS.

JOHN KIMBERLY BEACH,
Of Counsel.

Supreme Court of the United States.

OCTOBER TERM, 1893.

SAMUEL N. UFFORD, ET AL., Appellants, *vs.* CHARLES A. MORSS,	No. 310.
and	
WILLIAM H. KNAPP, ET AL., Appellants, *vs.* CHARLES A. MORSS.	No. 55.

BRIEF FOR APPELLANTS.

STATEMENT.

These two cases are, by stipulation and agreement, if the Court shall permit, to be argued together as one cause. They both relate to the same patent.

No. 310 is an appeal from a final decree of the Circuit Court for the District of Massachusetts.

No. 55 is an appeal from a final decree of the Circuit Court for the District of Connecticut.

The two cases were prepared for argument on the same record, and the Massachusetts case being reached first, his Honor, Judge Colt, delivered an opinion, printed at page 30 of the record in No. 310, sustaining the validity of the patent and the charge of infringement.

The Massachusetts defendants were merchants who sold, but did not manufacture, the infringing devices; while the Connecticut defendants were the manufacturers, and therefore the principal defendants.

Accordingly, the decree in the Massachusetts case was entered as a final decree, damages and reference to a master being waived; and the seat of litigation was transferred to Connecticut, where Judge Shipman felt bound to follow Judge Colt, as to validity and infringement, and referred the cases to a master for an accounting, and upon the coming in of the master's report and overruling of exceptions thereto, rendered a final decree for the complainants, that the complainants recover of the defendants the sum of $9,029.14 as damages.

The record in No. 55 contains all the testimony, while the record in No. 310 contains only the defendant's exhibits on the issue of validity and the opinion of Judge Colt. The printing of the testimony in No. 310 was dispensed with by stipulation (Record in No. 310, p. 33), because it already appears in the record of No. 55.

The two records are in effect two volumes, which form, when taken together, a complete record of either appeal, and care is taken in this brief to designate the volume referred to, in each reference, as "record in No. 55," or "record in No. 310," as the case may be.

All the questions of validity and infringement are the same in these cases, the record (up to interlocutory decree) is the same, and the parties are the same in interest though not in name. It is thought, therefore, that no objection will appear to carrying the stipulation already made by counsel into effect, and hearing the two causes, upon the two records, as one cause.

REASONS FOR APPEAL.

I.

(In both Appeals.)

The Court erred in decreeing that the second claim of the patent in suit (being the only claim of which infringement was charged) was a valid claim, and that John Hall was the first and original inventor of the improvement claimed therein.

II.

(In both Appeals.)

The Court erred in decreeing that the defendants have infringed the said patent, and upon the exclusive rights of the complainant under the same.

III.

(In the Connecticut Appeal.)

The Court erred in overruling the following defendant's exceptions to the Master's report.

1. The committee and Master having found that "it does not appear by the evidence that solid skirts of such form" (meaning solid skirts of forms similar to the defendants' skirts) "have or ever did have any considerable sale or great market value," the defendants except to said finding (*a*) because it does appear from the evidence that such skirts had substantial sale and market value, and (*b*) because the burden of proof was not upon the defendants to prove that the sales thereof were considerable or the market value great.

2. The defendants except to the finding of the committee and Master that the adjustable device on the defendants' skirt forms was embodied in said forms for the purpose of selling them and did in fact sell them, and that the plaintiff's expanding device was absolutely necessary to the defendants' skirt form to give it any sale, whereas the committee and Master should have found that the Everett dress form, a skirt form

similar in form to the defendants' skirt form, and not embodying the plaintiff's expanding device, was selling at the rate of over five thousand skirt forms a year when the defendants' skirt form was put on the market, and that the plaintiff's expanding device was not absolutely necessary to the sale of such skirt forms.

8. The defendants except to the finding of the committee and Master that the plaintiff is entitled to recover in these actions as damages the total profit which the plaintiff would have made if he had sold to his prior customers, so called, who had been purchasing from him, all the sales which the defendants made to said customers, (*a*) because the Master and committee, having found that the defendants' additions and improvements enabled the defendants' skirts to sell more freely than the plaintiff's, ought not to find that the plaintiff would have sold to said customers as many as the defendants sold; (*b*) because the plaintiffs' skirt being made under three separate patents, the committee and Master ought not to allow the plaintiff in these actions, as damages, the total profit which he would have made from sales of skirt forms embodying such other patented improvements; (*c*) because the plaintiff's skirt being made under four claims of the patent in suit, and the defendants' being found to infringe upon one claim only, the committee and Master ought not to allow the plaintiffs in these actions, as damages, the total profit which he would have made from sales of skirt forms embodying the patented improvements described in the other claims.

10. The defendants except to the finding of the committee and Master that the defendants' sales to the plaintiff's so-called customers deprived the plaintiff of sales of an equal number of dress forms on which he would have made an average profit of 87 cents.

11. The defendants except to the finding of the committee and Master that the sales made by defendants subsequent to September, 1886, were in any substantial part made to customers of the plaintiff, to whom the plaintiff was able to sell dress forms.

13. The defendants except for that the Master and committee should have found, that some portion of the sales made by the defendants to former customers of the plaintiffs displaced Everett and Diamond forms.

15. The defendants except to the finding of the committee and Master, that sales of skirt forms like Exhibit Plaintiff's Skirt by the complainant, have been in the proportion of four wood-post and five iron-post skirts out of every ten.

16. Defendants except to the finding of the committee and Master; that it is a fair inference from that fact that the sales claimed to have been lost by the complainant would have been sales in said proportion.

IV.

The Court erred in assessing damages on the theory that five-ninths of the sales claimed to have been lost by complainant would have been "iron-post" forms.

V.

The Court erred in increasing the damages two hundred and fifty dollars.

THE PATENT IN SUIT.

The patent in suit was granted to John Hall on October 12th, 1880, and assigned to the appellee on April 27th, 1886. The subject matter of the invention is stated in the following language:

> "My invention relates to improvements in dress forms, by means of which every part of the device is rendered adjustable so that it may be applied to a dress of any size or style, and fill it out perfectly in order that trimming may be placed upon it, etc. The mechanism for accomplishing this result is illustrated in the following figures."
>
> Record in No. 55, p. 28.

The specification then describes a structure, consisting of a number of thin strips called ribs, arranged vertically about a central standard; the shape of the ribs being such that the whole skeleton has the proper contour for supporting a skirt.

These ribs are connected with the central standard, near their tops and bottoms, by hinged stretchers or braces, whose inner ends are assembled on sliding collars, movable up and down the standard, and thus the upper and lower ends of the ribs may be opened out or shut in on the same general principle of operation as that of a common umbrella.

When the ribs are once adjusted to the desired measure at top and bottom, the sliding collars are held in vertical position by "blocks" or set collars, which are fixed in place by set screws.

At the lower ends of the ribs the braces are single; but at the upper end, and for the purpose of affording mutual support against gravity and against pressure, there are two braces to each rib, arranged upon the well known double brace or lazy tongs plan, i. e. one brace so inclined toward the other as to form, with the central standard, a triangle which is self-supporting so long as the inner ends of the braces are fixed in a given position.

The common umbrella is again the illustration of this triangulation of braces on a central standard, which is plainly visible when the umbrella is wholly or partly open, and by means of which each brace supports the other against falling under the influence of gravity and against external pressure when the sliding collar on the umbrella handle is held in any fixed position.

The patent has four claims, of which the second alone is alleged to have been infringed.

The second claim undertakes to cover, as the invention of the patentee, the combination of mechanical devices described in the patent, whereby the result of adjusting the ribs is accomplished.

It reads as follows:

> "In combination with the standard *a* and ribs *cc*, the double braces e^3, sliding blocks $f^1 f^3$, and rests $h^1 h^2$, substantially as and for the purpose set forth."
>
> Rec. in No. 55, p. 29.

The appellants contended in the court below, that if the claim was limited by the letters of reference to the specific devices shown and described, or their equivalents, for producing the same specific effects, the defendants did not infringe; and that, unless so limited, the claim was anticipated by the prior art.

But the Court held, that the claim was not so limited, and summarily disposed of the question of validity by saying:

> "There is nothing in the state of the art as exhibited in the record which can be called an anticipation of the Hall patent, though each of the elements of the second claim, with the exception perhaps of the ribs, is found to be old."
>
> Record in No. 310, p. 31.

This brief will discuss in order the questions of validity, infringement, and the issues arising on the overruled exceptions to the Master's report.

As a preliminary to an intelligent understanding of the question of validity, a short statement of the prior art is essential.

THE PRIOR ART.

Adjustable garment forms of many kinds were old at the date of the alleged invention.

The Everett form, illustrated by Exhibits "Everett Form" and "Everett Complete Form," is a skirt form and consists of a central standard, a rigid band at waist divided into two

segments, to each of which a semi-cylindrical cage work is riveted, and an expanding mechanism of the slide and socket type, whereby the two segments of the band and the two halves of the dress form thereto attached are adjusted to and from each other.

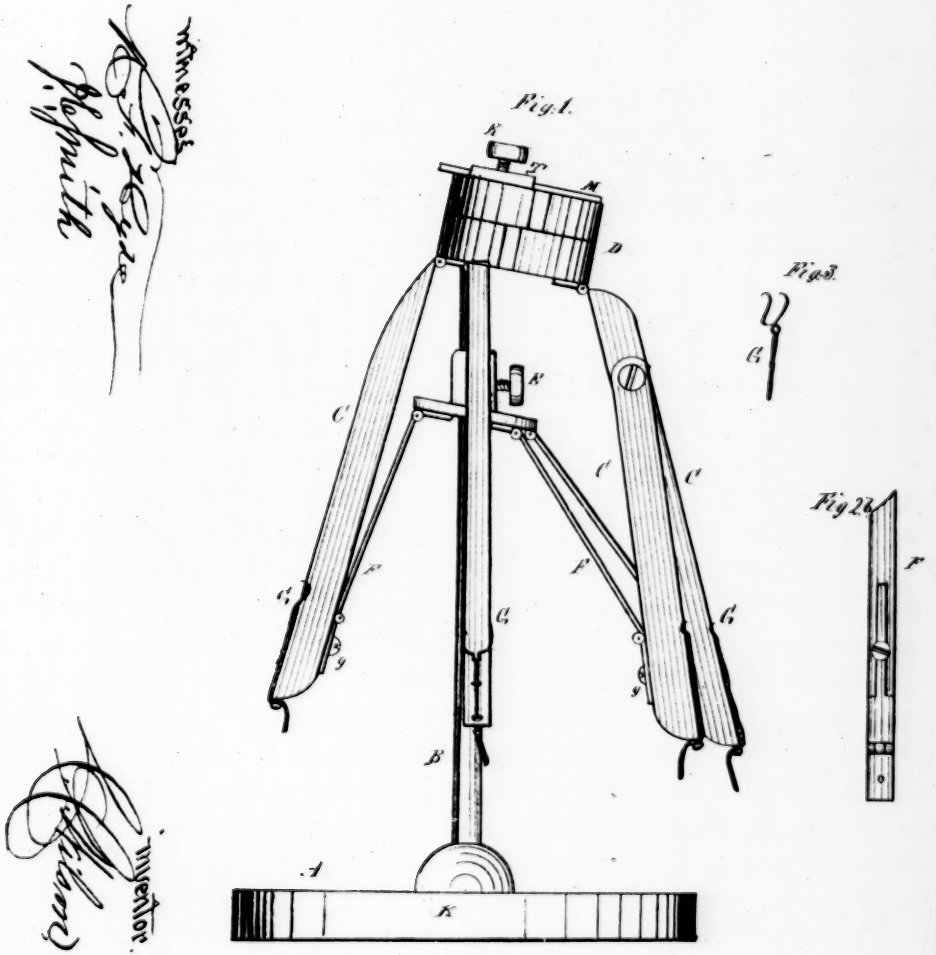
Mr. Norris, a witness called by the complainant, says that he put these forms on the market "near thirteen years ago," i. e., in 1875–1876; and that the sales increased from 2,000 to 2,500 in the first year to about 11,500 in the year 1883 (Rec. No. 55, p. 318).

Thus it appears that prior to the alleged invention of the patent, adjustable dress forms were not only known, but were on the market and in common use. In the picturesque language of the witness Norris, he "salted the ground" (Rec. No. 55, p. 322; Int. 49), and the patentee is an improver and not a pioneer in adjustable dress forms.

The Exhibit Everett patent (Rec. in No. 310, p. 14) does not show any ribs as such, but does show the adjustable waist band. Mr. Norris attached to the two segments of the waist band a rib structure, and produced the dress forms shown in the Exhibits "Everett Form" and "Everett Skirt Form," and which are the forms referred to in the testimony above quoted.

As the Exhibit "Everett Form" is in this case more important than the Everett patent, the drawing of the patent is not inserted here.

The Wilson patent of 1870. (Drawing inserted).



The Wilson hoop-skirt form, shown in the Exhibit "Wilson Patent," was primarily intended as an adjustable form for the manufacture of hoop-skirts so as "to enable any size or shape of skirt to be made upon it."

It consists of a central standard, a waistband block "divided into two parts," and adjustable by a slide and socket mechanism, and to this waistband are hinged "the ribs C as many as are necessary."

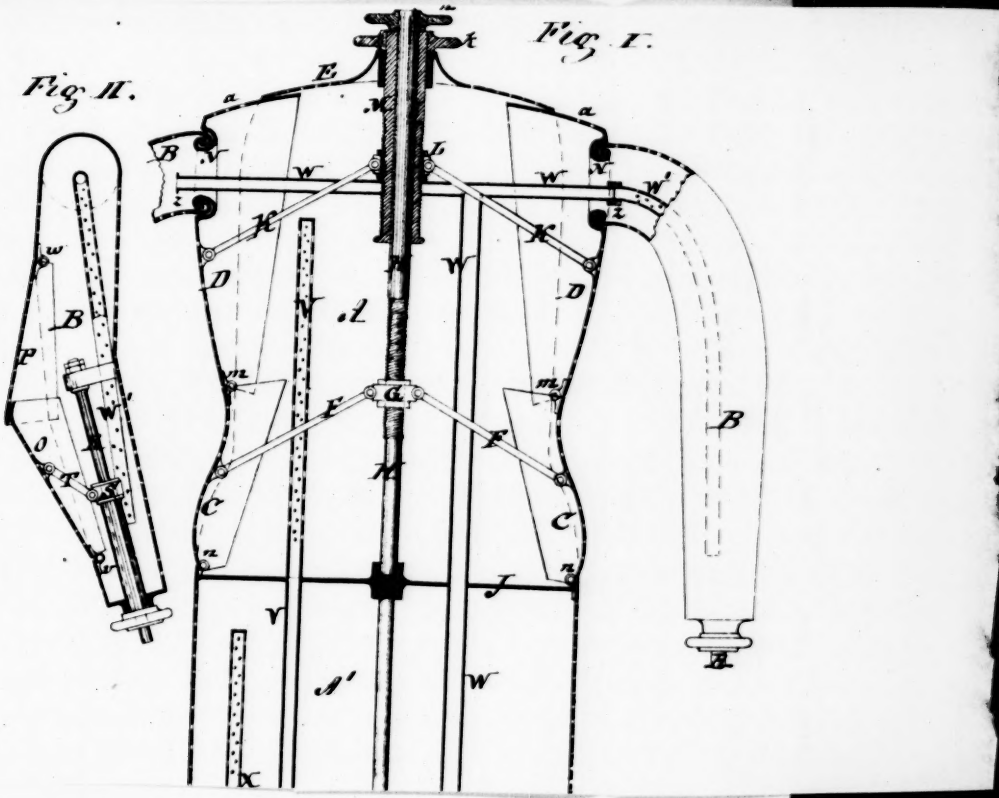
These ribs C are hinged near their lower ends to jointed braces, whose inner ends are hinged to a block sliding on the standard, and the position of the sliding block is determined by a set screw.

> "In operation the adjustable band block may be drawn out to make any size waistband for skirts without its being necessary to increase the circumference of the bottom of the form, and by simply moving the sleeve E upon the shaft B up or down, the size of the skirt is uniformly and evenly increased or diminished."
>
> Specification of Wilson Patent, Rec. No. 310, p. 13.

This Wilson form shows a series of independent ribs as in the patent in suit, instead of the shaped sections of the Everett form. It also shows the application of brace expanding mechanism to the lower ends of the ribs, as in the patent in suit.

Record in 310, p. 12.

The two Franke patents of 1875. (One drawing annexed).

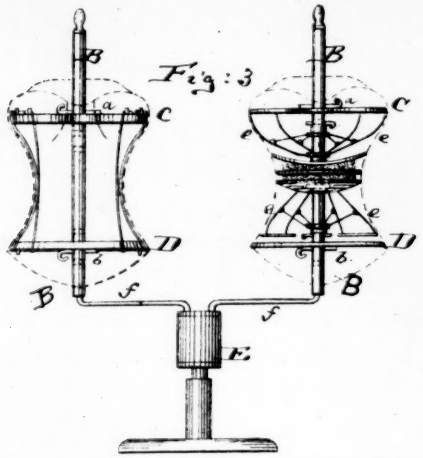


The two Francke Patents show coat and trousers forms, respectively, composed of one or more standards, and outside framework of suitable shape, and hinged sections of the framework which are made adjustable by means of braces extending to the central standard, and operated to move up and down thereon at their inner ends.

These patents exhibit another phase of the application of brace-expanding mechanism to garment forms.

Record in 310, pp. 7–11.

The Ferris Patent of 1878. (Drawing annexed).



The Ferris Patent is for an apparatus for displaying corsets. It consists of a central standard, two blocks at the top and bottom of suitable shape, and between the two, an umbrella-like arrangement of ribs and braces for pressing against the interior of the corset and imparting shapeliness to it. This is also an instance of the prior use of brace-expanding mechanism in a garment form.

In this patent the braces are triangulated on the standard to form "double braces," one of the braces being prolonged, as in an umbrella, "so that when stretched or spread laterally, such framework *c* will bear against the inner side of the corset that is placed around the boards and tend to impart to it the requisite fullness."

Record in 310, p. 17.

The Common Umbrella.

The common umbrella is an example of double brace-expanding mechanism. It has a central standard, a series of ribs, double braces, and apparatus for operating the braces so as to expand the ribs. The ribs of the umbrella are formed in part

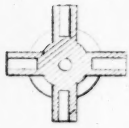
of the upper set of braces and in part of prolongations thereof, and because the ribs are immovably united with the upper braces the lower ends of the ribs travel in fixed curves. In the dress form because the ribs are hinged to the braces their upper and lower ends may be independently moved to and from the standard, so as to preserve substantial parallelism, therewith.

The Balch Patent of 1867. (Drawing annexed).

E. A. Balch.

Reel.

No. 68,831. *Patented Sept. 17. 1867.*



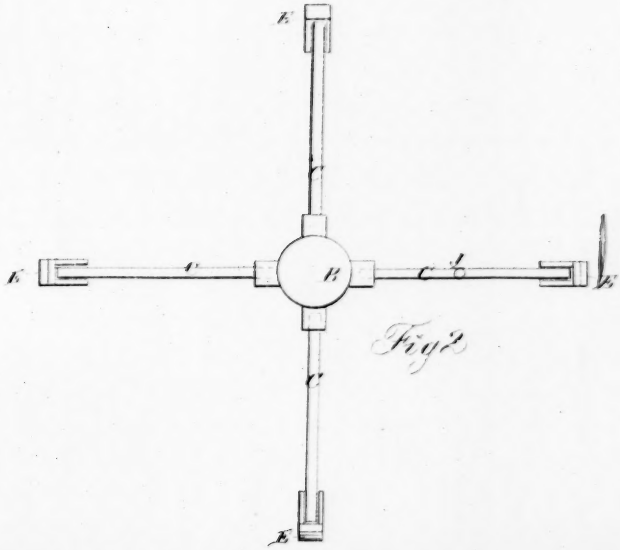


Fig 2

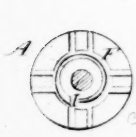


Fig 3

The Balch expanding mechanism not only contains all the elements of the second claim but contains these elements arranged so as to accomplish the same result in the same way.

The ribs, called "winding blades" in the specification, are hinged to double braces in the same way as the ribs *c* of the patent, and the result of securing parallelism of the ribs with the standard is thus made possible.

The drawing of the Balch patent does not show any specific device for holding the sliding block which carries the inner ends of the lower set of braces at the desired point, but the specification says:

"Some convenient device may be used to retain the sliding head F at the desired point."

Record in No. 310, p. 19.

It is apparent on reading his specification, that Balch did not claim to be the inventor of the double brace expanding mechanism, but that his invention related to the specific device of duplicating one set of the double braces to secure an absolutely vertical position of the winding blades at all stages of expansion.

We do not, therefore, present the Balch patent as the first instance of the radial and parallel adjustment of ribs about a central standard by means of double braces; but as a convenient method of establishing that such a mechanism was well known in the arts, prior to the alleged invention of this patentee.

Rec. in No. 310, p. 18.

Taking up now the bearing of the prior art upon the patent in suit, the first point is, that

I.

THE SECOND CLAIM IS ANTICIPATED BY THE BALCH PATENT.

It is apparent, on inspection of the Balch patent drawings, that the mechanism of the Balch reel is identical with the mechanism of the claim in suit.

There is, indeed, no controversy between the expert witnesses on this point, for all are agreed that the standard, the

double braces, and (on a liberal construction) the blocks and rests of the second claim are found in the Balch reel, combined and operated substantially as in the patent in suit.

The only controversy arises over the presence or absence of the "ribs *e*" in the Balch combination. The appellants contend that the winding blades of the reel are, for all the purposes of the combination, the same as the "ribs" of the second claim, and that thus the anticipation is made literal and complete; but the appellee's experts draw a distinction between the ribs of the dress form and the ribs of the reel, based on the difference in shape, but expressed in terms of the utility—that of holding a skirt—which results from the change of shape.

Mr. Shepard says of the Balch patent:

> "This device, as before stated, is intended for use as a reel, and is expanded or contracted only for the purpose of varying the length of the skein which is wound thereon, and consequently only four arms are used, so that the skein when upon the reel, if viewed in plain view, gives a square figure. Four such arms, even if of the proper length for a skirt form, would not be the skirt form of the patent, because they are not capable of giving the requisite roundness of form." Rec. in No. 55, fol. 36.

But see the Balch specification (inserted at the end of this brief) in which Balch says:

"In the edge of block B are cut four notches *more or less;* and within each of such notches are pivoted the arms E D," etc.

Mr. Coleman altogether declines to regard the Balch patent seriously, saying:

> "I do not consider that the patent to Balch for a reel has any relation whatever to the art to which the device of the complainant's patent belongs, because the chief ingredient of the device of the complainant, namely, a structure capable of imparting its form to the fabric placed upon it, is wanting."
>
> Rec. in No. 55, fol. 162.

The distinction taken by the expert is literally unfounded, since any structure will "impart its form" to a yielding fabric thrown over it. What he means is, that in one case the structure has such a "form" as to be useful for holding a dress, and in the other case it has not.

That this is the only difference which the experts can find is demonstrated by the following distinct admission of that fact by Mr. Shepard.

> "Cross-Int. 12. On the other hand, four such segments as are contained in the defendant's dress form would, if so attached to the Balch expanding mechanism, come within the description of the second claim as you understand it; would they not?
>
> "Ans. Yes, because they are formed with special reference to giving the necessary round shape throughout; practically the whole circumference of a skirt form."
>
> Rec. in No. 55, fol. 37.

Manifestly the common thought which underlies these distinctions, is that the combination of the second claim is not the combination of the Balch patent, simply and solely because in the one case the ribs are shaped to give rotundity to a skirt, and in the other case they are not.

The reply which the appellants make to this distinction, is that it expresses a difference of utility but not a difference of mechanism.

We now undertake to show in the first place that the combination is as a mechanism the same in fact and in law whether the ribs be shaped to receive a skirt or to receive a skein of yarn.

In the second place, we shall show that having regard to the special application of the mechanism to the use of supporting skirts, the combination of the second claim does not differ functionally from prior expanding skirt forms.

Having thus shown the absence of any new function, either in the internal coöperation of the elements as a mechanism, or in the application of the mechanism to its special use, and having also shown that each one of the elements of the combination is old as a separate device, we shall submit that mechanical novelty is positively excluded, and that the claim is void.

The claim is on its face for the combination as a mechanism irrespective of its use; and unless limited by the letters of reference to the specific devices shown in the drawings of equivalent devices for producing the same specific effects it includes any known devices which when substituted in the combination are governed by the same law of coaction.

On the narrow construction the defendants, do not infringe; and on the broad construction the claim is anticipated by the Balch patent.

But the appellee's experts reject both the narrow and the broad construction, and attempt to limit the claim to ribs having the external configuration of a skirt without limiting the range of equivalents as to the other elements. That is to say, to convert the claim into a claim for a dress form.

The primary utility to which the patentee sought to apply the combination was that of holding a skirt, but the utility of the combination is not limited to dress forms. It is useful to adjust a reel, and unless the law of its operation in adjusting a reel differs from the law of its operation in adjusting a dress form, the combination is the same when reel ribs are used as when dress form ribs are used.

An expansible dress form is not in itself the stated subject of the claim. Nor is an expansible dress form as a result the lawful subject of monopoly—especially in view of the Everett form.

The words "dress form" describe simply a utility, and cover any kind of mechanism capable of that utility, whereas

it is plain that the inventor of any particular dress form must be limited to the means whereby he achieves the result of making an improvement in that class of machines.

The point was well stated by Judge Wallace, in Aron vs Manhattan Railway, and this Court adopted his views and quoted with approval the following language: (132 U. S., 84.)

> "The patentee is entitled to the merit of being the first to conceive of the convenience and utility of a gate-opening and closing mechanism which should be operated efficiently by an attendant in the new situation. His right to a patent, however, must rest upon the novelty of the means he contrives to carry his idea into practical application."

So here, the only subject of claim is a mechanical combination, and the claim must stand or fall on the patentable novelty of the combination as a mechanism or "means," and not upon the use to which the patentee has put it.

In this case the sole point of novelty as compared with the Balch mechanism, is the substitution of dress form ribs in the place of yarn winding ribs, and the result is claimed to be a new combination.

Now the fundamental theory of an invention by combination requires that the patentee should have put the elements in some new mechanical relation to each other. It is not material that every element is old; but it is material that a new mode of operation should result from their association.

A difference in shape which does not affect the mode of operation is an immaterial difference so far as the combination is concerned.

It makes no difference that the shape of the rib determines the use to which the combination may be put, for if the mode of operation remains unchanged the invention, if any, is not of

a new combination but of a new shape of rib, if there is any novelty in the rib as a separate device, or of a new use, if the use is new within the exception to the general rule, laid down in Lovell vs. Cary.

That the combination remains the same in mechanics and in law, whether the ribs be of the dress form shape or of the yarn winding shape, is easily demonstrated.

First, as to the mechanics :—

Suppose the winding blades of the Balch reel to be made of some material such as lead, stiff enough to hold its shape, yet yielding enough to be molded into many shapes. Now suppose the strips are bent into the shape of the ribs of the "Exhibit Baby Draper" (which is a short ribbed skirt form held to infringe the patent), and the mechanism is used to adjust the ribs so shaped.

Is not the mechanism the same in each case? Do not all the parts cooperate in the same way to procure the same result of adjustment in each case?

It is plain, therefore, that the configuration of the exterior surface of the ribs does not affect the mechanism in any way; and that whatever difference is produced by substituting one form of rib for another, is a change not in the mechanism, but in the utility of the ribs. It is not a change in the "means" whereby (in the language of this patentee) the machine "is made adjustable in every part," but only a change in the utility of the machine when adjusted in any given position.

Postponing for a moment the questions of the novelty of the *ribs c* as a separate device, and of the novelty of the use or utility to which the patentee puts the mechanism; it is certain that in mode of operation, and mechanical effect, the substitution of the dress form ribs for the yarn winding ribs does not affect the identity of the combination as a mechanism, because it does not affect the law of coaction of the elements.

As to identity in law, another simple test may be applied: Suppose that Balch had been the original inventor of the generic combination of standard, ribs, double braces, etc., and had claimed the combination in his patent, in the language of the second claim of the patent in suit, or in some other appropriate phrase.

Now suppose that Balch had sued the appellants for making dress forms embodying the combination invented by him.

What defense could the appellants make on the issue of infringement?

Could the appellants stand on the ground that the ribs of a dress form were different things from the ribs of a reel? Or could they say that the Balch Patent belonged to a different art because it did not show a structure capable of supporting a dress?

Evidently not, for the answer would be that the exterior shape of the rib was immaterial, because it did not qualify the mode of operation of the mechanism whereby the ribs were adjusted; and that all the parts coacted in the same way whether the rib was of one shape or another.

Defendants therefore could not stand on the claim that the dress-form rib was not the equivalent of a reel rib in the combination, and could not deny (as against a pioneer inventor of the mechanism) that their form contained every element of the Balch claim or its mechanical equivalent.

In short, the defendants would be driven by the manifest identity of the two mechanisms to take refuge in the claim that they did not infringe because, by employing a differently shaped rib, they had enabled the mechanism to be put to a use not mentioned by Balch in his patent.

To this defense the conclusive reply would be, first, that the use, though different in name, was identical in kind, since the only use of the mechanism was to support and adjust ribs about

the standard, whether in a dress form or in a reel; and, second, that "the inventor of a machine is entitled to the benefit of all the uses to which it can be put, no matter whether he had conceived the idea of the use or not."

Roberts vs. Ryder, 91 U. S., 150.

Moreover, a dress form might well be used as a reel.

We submit that the result of the hypothetical case would be that the defendants would have to pay Balch for the use of his mechanical combination in a dress form.

But another result would follow; to wit, that upon the expiration of the Balch Patent the defendants would have an undoubted right to use the generic combination freely, either in a dress form or in a reel; and this right would not depend on the payment of tribute; for it would be shared by the public at large.

Now, the appellees and defendants stand to-day clothed with exactly the same right to use the generic combination of standard ribs, double braces, etc., in a dress form, that they would have, if they had paid Balch for that privilege during the life of his patent.

As a typical mechanism it is as much public property by prior description in the Balch Patent as if Balch had claimed it and the patent had expired; and anybody has a right to use it either on a reel to adjust one known form of ribs, or in a dress form to adjust another known form of rib, or on a folding clothes rack to adjust a third known form of rib.

Again, let us put the converse of the illustration, and suppose that the Balch reel had been later in date than the patent in suit, and the complainant had sued the defendant for making reels embodying the combination stated in the second claim.

The learned counsel for the appellees would in that event justly assert that the shape of the rib had nothing to do with

the identity of the combination, because it was manifest that the substitution of one shape of rib for another did not affect the mode of operation of the mechanism: that ribs of the shape used for winding yarn were old; and that the substitution of one known form of rib for another in the combination, to adapt the combination to a different utility, would not avoid the claim as being a distinct invention, because the substituted rib and the substituted utility were both old.

All this would be true, and the result would be that the complainants' patent would include, as the property of the patentee, the Balch reel; if the Balch reel had happened to be of later origin than the second claim.

But since the Balch reel is earlier than the alleged invention expressed in the claim, it follows that the claim is anticipated thereby. "That which infringes if later, would anticipate if earlier."

Peters vs. Active Mfg. Co., 129 U. S. 530, 537.

The Court will observe that the appellants do not intend to push the argument just made, beyond its logical effect.

The argument proves that the combination of ribs, standard double braces, etc., is old when considered with reference to its generic function as a mechanism, and the conclusion is that the patented claim cannot be upheld as a generic claim to the enumerated elements and any mechanical equivalents thereof.

It is nevertheless within the range of logical possibility that the *ribs c*, in which alone the alleged novelty of the patented combination resides—or from which it is supposed to radiate throughout the combination—may have in addition to the generic function of radial adjustment to and from the standard, some peculiar minor function which is new.

And this question remains to be discussed.

In view of the fact that the external shape of the ribs cannot affect the internal or subjective functions of the mechanism,

it is plain that the search for a new function arising from the peculiar shape of the ribs may be limited to the external or objective functions of the combination when applied in that special utility to which the change in the form of the ribs adapts it.

That is to say, to the question whether in its actual use as a machine for supporting skirts the patented combination develops any function which is new in skirt forms.

In entering on this discussion the appellees are not conceding that a "dress form" is in law a different machine from a reel; but while insisting on the identity of the patented combination with the combination of the Balch reel, we propose to follow the patentee into the particular art where he uses the old combination; with a view of supplementing the proof that the substitution of one form of rib for another does not affect the identity of the combination, by showing, also, that the combination when applied to the particular utility of supporting skirts does not develop in that relation any function which was new in that special utility.

There is, of course, no logical distinction between an expansible framework for supporting one kind of garment, and an expansible framework for supporting another kind of garment. But we are not now compelled to press this point, because in the Everett form we have a prior example of an expansible framework specifically designed for supporting skirts.

We are thus able to say that the *ribs c*, even when regarded as an expansible framework for supporting skirts, are old as a separate device; and, since by admission all the rest are old, that the patentee cannot claim to be the inventor of any one of the enumerated elements of his combination.

Parenthetically, it should be remembered that when Judge Colt sustained the patent he was not informed by the record of the existence of the Everett forms, or of any rib structure specifically intended to support a skirt; and this accounts for his doubt as to the novelty of the ribs.

"Each of the elements of the second claim, with the exception perhaps of the ribs, is found to be old."

Record in No. 310, p. 30.

The Everett form was put in evidence at a later stage of the litigation, in the accounting in the Connecticut case.

In considering the weight to be given to Judge Colt's decision, it is fair to say that the circumstance that the patentee was erroneously credited with being the first to devise an expansible frame for the specific purpose of holding women's dresses may well have had its weight, for sentimental considerations often determine the validity of a patent, and commercial success—which depends more upon the merchant than upon his wares—is a test easier of application than that of mechanical analysis.

However that may be, the fact is now certain, that each and every one of the elements of the claim, even counting the "ribs *c*" as dress form ribs, was old at the date of the alleged invention.

The mere limitation to dress form ribs does not, therefore, express any novelty, either in the ribs themselves or in the use to which they were adapted.

We return now to the question, whether the combination when used as a dress form develops any quality in that relation, which may serve as the basis for the proposition that the elements coact so as to produce a new function.

The discussion shifts at this point to a comparison of the patented combination with the Everett form,—not as a mechanism, for as a mechanism the combination has been shown to be old,—but with reference only to the manner in which each performs the specific function of supporting a skirt; this being the alleged novelty of function on which alone the claim can rest.

Since it is immaterial whether the patented combination be new, unless it includes the defendant's forms, we can make the comparison directly between the defendant's form and the Everett form.

On inspection, it is evident that when either of these forms is adjusted to any particular size (within the limits of its capacity) it will support a skirt; and it is impossible to see that one supports the skirt in any different way from the other.

The fact that the defendant's form is divided in quarters and the Everett form in halves is not of itself evidence of a difference of function; especially since it is plain that a dress form is divisible into halves, or thirds, or quarters, or eighths, at the will of the mechanic, by a simple process of subdivision of the ribs and multiplication of the expanding devices, such as Balch and Wilson suggest in their patents.

But the appellees contend that there is a functional difference between a four part form and a two part form, and their claim may be explained as follows:

It would be advantageous in a dress form to preserve, if it were possible, a circular cross section at the waist, because the form more closely simulates the human figure when of a circular cross section; and the use of eight ribs in the plaintiffs' patent enables this result to be approximated in the proportion that an octagon approximates to a circle. When the circle is small there is a substantially circular cross section, but as the form is expanded, the ribs diverge from each other in their radial expansion, and the sides of the octagon, enclosed by a string passed around the ribs, become longer.

So with the defendant's form, except that in this case the circular cross section is simulated, not by a multiplication of narrow strips, but by the use of only four segments, each shaped to a quarter circle. When the form is contracted to its utmost, the cross section at the waist is substantially a circle, but as the quarter sections expand and diverge the figure enclosed by a

string drawn about the ribs becomes a quadrilateral with large rounded corners.

In the case of the Everett form there are two segments, each semicircular; so that when the form is contracted to its utmost, the cross section at the waist is substantially a circle, but as the semicircular segments separate, the figure enclosed by a string drawn about the ribs becomes an oval.

None of these forms accomplish the mechanical result of preserving a circular cross section at the waist under varying adjustments; but each possesses a certain range of movement within which the octagon, or the quadrilateral, or the oval, will, in the eye of the dressmaker, pass more or less tolerably for a circle; but beyond which the skirt is no longer satisfactorily rounded out.

There is no doubt but that a four part form will remain tolerable to the dressmaker's eye over a somewhat larger range of adjustment than a two part form; but to the extent that the two semicircles support a dress satisfactorily to the dressmaker's eye, they accomplish the same result, in the same way as the four quadrants; and to the extent that the four quadrants are capable of larger adjustment than the two semicircles, without being rejected by the dressmaker, they accomplish the same result in kind, but to a greater degree. Again the eight ribs of the patented form are, as the result of the same mathematical law, capable of simulating a circular cross section over a still larger range of adjustment than the four ribs of the defendant's form.

Manifestly there is no mechanical difference in the manner in which these forms support a skirt. So long as the user is satisfied, it makes no difference whether the skirt hangs on two semicircles or on four quadrants; and when the user is no longer satisfied, it is not because any line of mechanical distinction has been passed, but because a gradual distortion from an apparent circle has at last become too obvious to be ignored.

As to the additional advantage in utility, of the four part form over the two part form, that can be measured accurately.

Thus Mr. Norris gives the minimum and maximum sizes of waist in inches of the Everett form as follows, as 20 to 28½ inches; 22 to 27½, 24 to 30, 26 to 32, according to size of form.

Record in No. 55, fol. 486.

And at folio 154 of the same record it appears that the defendants advertised their form as measuring at the waist 20 to 30 inches.

According to the claims of the respective manufacturers, the difference in practical range of adjustability in favor of the four part form was about as 10 to 6, on an average of all the four Everett forms: and the appellees cannot dispute the accuracy of these figures because they come out of the appellees' own mouth, and not out of ours. It may be possible, that when the two forms were expanded nearly to their maximum size, there would be a percentage of advantage in favor of the four part form in respect to apparent distortion. But, making every reasonable concession, the fact remains that some considerable degree of expansibility existed in the two part form, and that expansion in four parts does not add a new function in kind, but simply gives an additional degree of expansibility.

His Honor Judge Shipman expressed the following conception of the patent, in the opinion on the motion for attachment for contempt (the issue of novelty not being open), at p. 103 of the record in No. 55.

"The principle of the invention is the expansion or adjustment of a skeleton frame radially in all directions from a common center."

And in overruling the exceptions to the Master's report, he said: "Its entire character consists in its method of radial expansion without change of shape."

Rec. No. 55, p. 386.

The definition will not stand the test of comparison with the Balch reel. The "skeleton frame" of the Balch reel

"expands radially in all directions from a common center," just as truly as does the patented form, and a string drawn around the ribs of the reel will always enclose a blunt angled square, whether the reel be much or little expanded. The words "in all directions" must be synonymous with "in four directions"; otherwise, the defendant's form, which expands only in four directions, would not infringe the claim, and there is no mechanical "principle" or "method of expansion" involved in expanding the four segments of the defendant's form which is not fully illustrated in the expansion of the Balch reel in four directions by the same mechanical combination.

It follows that the patented combination possesses no new function, either regarded as a generic mechanism, or as a specific device for supporting skirts.

Thus far the discussion has been on the lines of mechanical analysis, and the conclusion of invalidity is based on the following propositions.

1st. That all the elements of the patented combination are admitted to exist in combination in the Balch reel, except the *ribs c*.

2d. That the Balch reel has certain winding blades, which do not differ in their relation to the other elements of the combination from the *ribs c*; but differ in their shape and in their utility.

3d. That the difference in the shape of the ribs has been shown not to affect the law of operation of the combination; but that the organized machine of the second claim is the same in mechanics and in law as the organized machine of the Balch reel, in respect of all its internal or subjective functions.

4th. That when examined with respect to its specific objective function or utility of supporting skirts, the patented com-

bination cannot be distinguished functionally from the Everett form in this respect; but differs from it only in the extent to which both forms exercise the common function of supporting a skirt under varying adjustment, in such a manner as to satisfy the eye of a dressmaker.

5th. That all the elements of the patented combination are old, as separate devices.

The conclusion of invalidity may be categorically expressed as follows:

That, since all the elements are old as separate devices, and since they do not, when organized in a dress form, coact so as to produce any new function as a mechanism or any new result as a dress form, the combination does not possess mechanical novelty and the claim is void.

It remains to point out that the distinction between a four part dress form and a two part dress form on which the alleged difference in function between the Everett form and the patented combination rests, and on which Judge Shipman leans, is one which is not suggested in the claim.

On the contrary, the claim would be satisfied by a two part form operated by double braces; and this is too manifest to require argument.

The attempt to construe the claim into a claim for multiple expansion in dress forms is therefore wholly unwarranted.

There is another recognized test of invalidity, to wit: that of the quality of the mental act required to devise the patented combination, and the claim is also void when tried by that test.

THE SECOND CLAIM IS ALSO INVALID WHEN TESTED BY EXAMINING THE QUALITY OF THE MENTAL ACT REQUIRED TO ORIGINATE THE PATENTED COMBINATION.

The stated problem which the patentee set before him is expressed as follows in the patent:

> "My invention relates to improvements in dress forms by means of which every part of the device is rendered adjustable so that it may be applied to a dress of any size or style and fill it out perfectly."
>
> (Rec. in No. 55, p. 28.)

The claim in controversy is not so comprehensive. As Judge Colt says,

"This claim describes the hip portion of the skirt."

(Rec. in No. 310, fol. 110.

The problem is thus reduced to improving the adjustment of the hip portion of skirt forms,—*for example, the Wilson form.*

Now the solution of that problem required either one or two things.

1st. That the patentee should invent an expanding mechanism for that purpose; or

2d. That he should select some existing expanding mechanism for that purpose.

That he invented any expanding mechanism will not be claimed.

That he selected an old expanding mechanism, of which the Balch reel is an example, is evident.

The possibility of invention is therefore limited to three cases.

1st. That the mechanism selected required some change or adaptation which amounted to invention before it could be adapted to and used in the dress form.

2d. That the mechanism selected did not require such change, but that the idea of applying it to dress forms was in itself an inventive thought.

3d. That the application of the selected mechanism to its new utility resulted in the development of some unexpected function which it did not formerly possess.

The first supposition may be dismissed at once, for Mr. Shepard admits in terms that the mere application of the defendant's ribs in place of the yarn winding blades of the Balch reel would satisfy the claim, without any other change, and this is plain to be seen.

The second supposition is equally untenable, for the particular mechanism which the patentee selected was not only well known, but is fully described in the Balch patent of which he is conclusively presumed to have known; and that the mechanism would adjust one form of rib as well as another was obvious on looking at it.

Finally, it is has been shown that no unexpected function or result is achieved by putting dress form ribs in the place of yarn winding ribs, either in the subjective functions of the mechanism as an abstract tool, or in its objective function when actually used to support a skirt.

In short, the case is one where the patentee has made no mechanical invention whatsoever, but has substituted one known form of rib for another in the Balch combination, with the result of adapting the combination to the known use of supporting a skirt, but without altering in any respect the coaction of the parts, and without accomplishing any functionally new result in dress forms.

In this aspect the case resembles that of Aron vs. Manhattan Railway, except that in Aron vs. Manhattan Railway the patentee appears to have exhibited some originality in adapting well known devices to the special purpose to which he contemplated their application.

In effect he altered the shape of the parts of a transom lifter, without changing its identity as a mechanism for opening and closing a swinging shutter or gate.

But in this case the alteration or adaptation required to adapt the mechanism of the Balch reel to a dress form was not one which involved any degree of originality whatsoever. The substituted rib structure was not of the patentee's contrivance, but was old, and the identity of the mechanism as a device for adjusting ribs about a standard is unchanged.

This case may also be regarded, although inaccurately and loosely, as the application of the well known double brace expanding mechanism to dress forms, and in that aspect it falls within the familiar rule repeated in Lovell vs. Cary, 146 U. S., 623.

> "The principle deducible from those cases is that it is not a patentable invention to apply old and well known devices and processes to new uses in other and analogous arts."

What is not an "analogous use" is defined as follows in Ansonia vs. Electrical Supply Co., 144 U. S., 11, quoted in Lovell vs. Cary, as follows:

> "On the other hand, if an old device or process be put to a new use, which is not analogous to an old one, and the adaptation of the old process to the new use is of such a character as to require the exercise of the inventive faculty to produce it, such new use will not be denied the merit of patentability."

Two things must concur to satisfy the above definition.

1st. The use must be "new," whereas in this case the use,—that of an adjustable skirt supporter,—was old.

2d. That some difficulty in the adaptation of the old device or process to the new use must appear, which requires the inventive faculty for its solution, whereas in this case no change or adaptation of any sort was required.

The suggestion that one engaged in making a skirt form would not be apt to think of a reel, is not only irrelevant,—because the reel is described in a patent,—but is also incorrect. The patentee was not simply engaged in devising a dress form, but in making a dress form expansible, and the natural limitation of his range of thought is not that of dress forms, but that of expanding mechanisms for adjusting ribs about a standard, of which umbrellas and reels are common and suggestive examples.

There is, in fact, no aspect of the case which indicates creative thought, either intuitive or constructive.

Nothing in the circumstances surrounding the conception of the alleged invention appears to lift the case from the level of mechanical selection and substitution. There is no proof of any constructive difficulty experienced by patentee and no proof of any pre-existing unsatisfied demand.

It appears that the patentee simply looked upon the Everett skirt form, which was in the market prior to his invention, (Record in No. 55, fol. 484), and was meeting with "ready sale and general appreciation" (Record No. 55, fol. 489), at $6.00 each, and saw that it would be a good thing commercially to make a cheaper and more completely adjustable form.

The patented dress form has met with a large sale, but, as is generally the case, this appears to be due to the concurrence of two factors: low price, (from $1.50 upward for the skirt), and the energy of the manufacturer. Thus Mr. Morss says of his acquaintance with the dress form trade prior to 1884.

Record in No. 55, fol. 205.

"Two years before that I had taken Mr. Hall's form and developed it. I had taken it when it was almost no business at all, and had spent two years of time and a great deal of money in introducing it, and had succeeded in building up quite a large business, comparatively, for that."

In short, there are no special circumstances surrounding the commercial aspect of the case which suggest the inference of invention, and mere commercial success is not of itself conclusive evidence of actual utility much less of patentable novelty.

McClain vs. Ortmayer, 141 U. S., 419.
Duer vs. Corbin Cabinet Lock Co., 149 U. S., 216, 223.

DEFENDANTS AND APPELLANTS DO NOT INFRINGE.

The claim is specific. It is not for any kind of ribs for example, but for the particular "*ribs c*," etc.

Now the effect of the use of reference letters, or of the definite article "the" (which comes to the same thing) has often been held to limit the claim to the specific thing described in the specification; and if it be true that a failure to make the claim as broad as it might have been made, operates as a disclaimer of what is not claimed, then the logical result of a claim for the "rib *c*" is that all other kinds of ribs are disclaimed.

It is no answer to say that a patentee is entitled to hold mechanical equivalents, for he is not entitled to hold any more than he claims.

Mr. Justice Jackson has recently (June 27, 1893) decided in a case where the several elements were mentioned specifically and by reference letters that,

"Such specific reference operates to confine and restrict the claim to the particular device described."

McCormick vs. Aultman, 64 O. G., 1791, 1793.
Citing Wier vs. Morden, 125 U. S., 106, and Hendy vs. Miner's Iron Works, 127 U. S., 375.

In the latter case Mr. Justice Blatchford said:

> Specification of the patent describes the cylinder I as having its outer surface formed into chambers or depressions separated from each other by longitudinal partitions. The cylinder of claim I is "the feeding cylinder I," and to be such cylinder must be a cylinder substantially as described, and it is described specifically as having chambers or depressions. The claim cannot be construed to cover a cylinder with a smooth surface not formed into chambers.
>
> Citing Fay vs. Cordesman, 109 U. S., 408, 420.
> Sargent vs. Sargent, 114 U. S., 63, 86.
> Shepard vs. Carrigan, 116 U. S., 593, 597.
> White vs. Dunbar, 119 U. S., 47, 51.
> Crawford vs. Keysinger, 123 U. S., 589, 606.

In this case the specification describes the ribs as follows:

> "In the skirt form *cc* are upright ribs, made preferably of thin springy material, held toward the standard *a* by means of elastic fabric *dd*, one band being placed near the botttom of the skirt, and one near the hip portion. These elastic bands are secured to each rib."
>
> "Instead of fabric, spiral spring wire may be used, although fabric is deemed more efficient and economical." Rec. No. 55, p. 28.

The defendant's ribs, as shown in Exhibit Defendant's Forms, are not held toward the standard by elastic pressure of any kind.

They are four in number, each made of a frame work of wires, soldered together and shaped like a quadrant in horizontal cross sections. The defendant's ribs are not the ribs *c*, and this is evident because four ribs of the kind described in the patent would not if substituted for the four ribs of the defendant's form give the necessary roundness of shape to the form.

In the patented form the necessary roundness of shape is approximated by the multiplication of narrow ribs, not shaped

so as to contribute to the contour of the form; but such shape as the patented form possesses is due to the proximity of one rib to another and is not defined as a circle or a curve until an elastic band bridges the intervals between the ribs, and thus develops a polygon more or less resembling a circle as the ribs are more or less numerous.

If it be said that the defendants have tied the ribs c together into four groups, by cross wires: the answer is that they have done more than that, for they have fixed each rib of the group in an unchangeable relation which gives the group a definite curvature, and a solidity of relation whereby the elastic bands are not required either to hold the ribs toward the standard or to fix the position of each with respect to the other, or to give a connected contour to the form.

Again, the defendents ribs are not copied from the ribs c, but from the Everett form: and the fact that ribs grouped into fixed curves were old on dress form, lends force to the suggestion that by confining himself to the *ribs c*, the patentee consciously restricted himself to the kind of ribs which he describes, and intentionally omitted to claim other kinds of ribs which were well known.

The same thing is true of other elements of the claim. The defendents have the double braces c^2; but they do not have the sliding blocks f^1 f^2, nor the rests h^1 h^2.

The defendant's forms follow the Balch type, and the ends of the upper set of the braces are secured to a collar which is fixed against vertical movement. The lower ends of the double braces are attached to a nut, which is internally threaded and engages with a threaded portion of the standard, so that when the standard is rotated, and the braces are held against rotation, —or *vice versa*,— the nut travels up and down the standard to effect the desired adjustment.

It follows that the defendants do not have the two rests h^1 h^2. This Mr. Shephard admits.

Cross-Int. 14. "Do you find in the Exhibit Defendant's Dress Form the rests h^1 h^2 specifically as set forth in the second claim of the patent?"

A. "h^2, yes: h^1, no. The rest h^1 of the patent is the collar pinned to the shaft or upright at a point just above the block, to which the upper rims of the double set of braces are hinged at the upper end of the short form."

There are, then, besides the differences in the ribs, these two differences between the defendant's mechanism and that of the patent:

1st, that in the defendant's mechanism only one of the sliding blocks is movable;

2nd, that the defendant's mechanism does not contain the rest h^1 specified in the claim as an element of the patented combination.

As to the specific equivalency of the defendants devices, it is manifest that the defendant's nut and collar do not enable the defendant's braces to be operated from the upper end, and that they do not enable the defendant's form to be swiveled on a fixed standard without altering the adjustment. Those are material functions of the two slides and two rests of the patent.

The rule formulated in Rowell vs. Lindsay, 113 U. S., 97, applies.

It is useless to talk of generic mechanical equivalents in this connection, for the claim cannot be upheld unless limited to the particular in which the patented combination differs from the Balch mechanism, to wit: in the use of two vertically movable blocks instead of one, and two vertically movable rests instead of one.

To find mechanical equivalency between the upper slide and rest of the Hall Patent, and the fixed collar of the defendant's form, which is, also the fixed collar of Balch reel, is to identify

the construction of the patent with the Balch combination in the only respect in which the two are different.

Blake vs. San Francisco, 113 U. S., 679, is a similar case.

That this narrow construction of the claim is the true one will also appear from the file wrapper and contents, printed in the record of No. 310, at pp. 24–29. On p. 26 will be found two claims which were rejected and cancelled. The first of these claims is on its face a broad claim for:

> "A dress form consisting of a central standard, one or more series of adjustable ribs, and corresponding series of braces or stretchers hinged to one or more runners or sliding blocks upon standard and having their outer edges connected with said ribs, whereby the dress form may be expanded or contracted substantially as and for the purpose set forth."

The original broad claim was rejected in reference to the Ferris patent and the rejection was acquiesced in and the claim cancelled.

By a familiar rule the remaining claims are to be construed with reference to the cancelled claim, and upon making this reference it will be found impossible to avoid the conclusion that the present second claim would have shared the fate of the original, first claim, except for the fact that it was apparently limited by the specific enumeration of letters of reference, to the particular construction indicated in the drawings.

The attention of the Court is also invited in this connection to the case of Morss vs. Manchester, 32 Fed. Rep., 282, which was a suit based on the patent here in controversy and decided by Judge Benedict before Judge Colt upheld the patent. In that opinion Judge Benedict holds the patentee strictly to a narrow construction of the claim and says:

> "They (the defendants in that case) use a different construction and their dress form is, therefore, no infringement upon the Hall patent, assuming that patent to be valid, which may be doubted."

In his decision in No. 310 Judge Colt, although his attention was called to it, made no reference to the fact that Judge Benedict had previously had the patent under consideration, but in a later case (Morss vs. Domestic Sewing Machine Co., 38 Fed. Rep., 482), Judge Colt distinctly expressed his dissent from the narrow construction which Judge Benedict put on the patent.

It is instructive to examine the alleged infringement in the Manchester case,—vide Exhibit the Diamond form,—in view of this divergence of judicial opinion as to the scope of the second claim in suit. As the matter now stands this Diamond form,—and by analogy all the defendant's form, are within the patent in Boston and outside of the patent in Brooklyn and no explanation is given except that one judge is "unable to agree" with another.

We submit that the language of the claim, the state of the art, the rejection of the original broad claim and considerations of comity united in requiring of the Massachusetts Court a narrow construction to be put on the second claim, and that the Court erred in construing the claim to include the defendant's forms.

III.

DAMAGES AND PROFITS.

The report of the Master divides the defendant's dress forms into two classes.

1st. "Full figures," or those which counterfeit the entire female figure.

2d. "Skirts," or half figures, which are not built up above the waist line.

Between these two classes the Master makes a wide distinction.

As to the "full figures" the Master finds that:

> "The evidence shows that the Everett dress form was on the market at the time defendant's form was given to the trade, and was selling at the rate of 11,500 a year, for $7.50 apiece and upwards, and the expanding devices of this form were scarcely worth naming, and they gave it little or no advantage over a solid or non-expanding skirt. When the forms of complainant came on the market, the sales of the Everett form declined rapidly," (note that this is erroneous; the sales of Everett increased until the defendant's form came on the market) "chiefly because of their superior expanding devices, but there is nothing in the testimony showing what or what proportion of the previous customers of the Everett was secured by the complainant and what by the defendants, but there can be no doubt but that the defendant's form would have taken a large proportion of the trade which this form was then supplying, and which the evidence shows was largely for the display of garments on sale, had it been a non-expanding form."
>
> Rec. in No. 55, p. 369.

From these premises the Master correctly reasoned that since the Everett form was (in his classification for commercial purposes) practically a solid form, and since it had a large sale, therefore the expanding devices of the defendant's "full figure" were not absolutely necessary to give the defendant's full figure any sale.

There was no evidence showing what proportion of sales or what proportion of profits was in fact due to the patented expanding device, and the Master concluded as to the "full figures" that the complainant was entitled only to nominal profits and damages.

These findings of the Master were sustained by the Court.

As to the skirts, he finds that:

"It does not appear from the evidence that solid skirts of such form have or ever did have any considerable sale or great market value." Rec. in No. 55, p. 366.

And from this lack of evidence the conclusion is reached that the expanding device of defendant's skirts was "absolutely necessary" to give them any sale.

Accordingly the Master finds that the defendants ought to account for the total profits made on their "skirts;" and, further, that in so far as the skirts were sold to prior customers (so-called) of the complainant, the complainant was damaged as if he had lost a sale for every sale so made by the defendants.

The pith of the Master's reasoning lies in his assumption that solid skirts were not salable, and that solid full figures were salable; wherefore, he says, the defendant's sales of skirts were wholly due to the expanding device, but the sales of full figures were not.

The first exception relates to the assumption that solid skirts were not salable.

The finding is peculiar. It is not a finding of fact, but a proposition as to the state of the record.

The Master says:

"It does not appear from the evidence that solid skirts of such form have or ever did have any considerable sale or great market value."

The exception to this finding is twofold.

(*a*) "Because it does appear from the evidence that such skirt had substantial sale and market value."

(*b*) "Because the burden of proof was not on the defendants to show that the sales thereof were considerable or the market value great."

There can be no doubt that the Master was altogether wrong as to the evidence, and his finding in this respect is quite inexplicable on any other theory than that he overlooked the testimony of Mr. Norris at ints. 17 and 18, page 319.

The Master cites this witness with approval in the portion of his report already quoted, to establish the proposition that the Everett form "was selling at the rate of 11,500 a year."

But the same witness testified that up to 1883 one-half of his sales were sales of "skirts," and that subsequent to 1883 about one-quarter of his sales were sales of "skirts."

The testimony is as follows:

> Int. 17. "Of all the sales you made like Everett's complete form and Everett form" (the latter being the 'skirt' or draper), "what was the proportion of the latter prior to 1884?"
>
> A. "I should think about half and half."
>
> Int. 18. "What has been the proportion since that time?"
>
> A. "I should think that I had not sold nearly as many drapers or Everett forms as I did in former years, and I can only answer that by giving the reason why. I should say there had not been half as many drapers sold—I mean by that Everett forms."
>
> Rec. No. 55, p. 319.

Now the annual sales of the Everett form increased from 9,000 in 1881 to 11,500 in 1883.

Rec. in No. 55, p. 318, int. 4.

And this although the patented form was then on the market, and was being sold through the same channels of trade, to wit: chiefly through paper pattern agencies.

See as to Everett form Rec. in No. 55, p. 318, Int. 5.
See as to patented form Rec. in No. 55, p. 119, Int. 23.

In 1884 the defendants put their form on the market, and from that moment, and not until then, the sales of the Everett form became to decrease. The witness, Norris, attributes this decrease to "the introduction of a new style of figure."

Rec. in No. 55, p. 322, Int. 50.

And the defendant's figure was the only one introduced on the market at that time.

Between 1884 and 1887 the sales of the Everett forms fell off twenty-five per cent.

Rec. in No. 55, p. 318, Int. 8.

In 1887 the sales of the defendant's forms, as appears by the defendant's account, was approximately 4325 forms; or 1450 more than enough to account for the twenty-five per cent. decrease in the sales of the Everett forms.

In 1887 Norris altered the Everett form over into a four part form, in order to meet the pressure of the defendant's competition by offering a figure capable of four part expansion, called the Peerless.

Rec. in No. 55, p. 319, Int. 11.

In that year the sales of the Everett form fell off about ninety per cent, and the sales of the Peerless were about ten times as great as of the Everett.

Rec. in No. 55, p. 318, Int. 10, and p. 19. Int. 13.

By a simple process of calculation the number of Everett "skirts" sold between 1881 and 1886 inclusive is as follows;

Between 1881 and 1883, inclusive, there were at least 37,500 Everett figures sold, of which, one-half, 18,750, were "skirts."

Between 1884 and 1886 inclusive, there were at least 11,500 —25%= 8,625 Everett forms sold in each year, or a total of 25,875 for three years; of which something less than a quarter, say 6,000, were "skirts."

This makes a sale of 24,750 "skirts" sold in six years, which the Master says "had little or no advantage over a solid or non-expanding skirt."

The Everett skirt or draper sold at $6 a piece prior to August, 1887.

Rec. p. 320, Int. 28.

The average annual sales of the Everett "skirt" between 1881 and 1886 inclusive, were therefore over $36,000.

This testimony is undisputed. It comes out of the mouth of the complainant's own witness. No witness for the defendants contradicted him, and the Master properly ruled that no witness for the complainant could be permitted to contradict him. Rec. p. 347, Int. 7.

We repeat, that the finding of the Master is not a conclusion based on the evidence, but an incorrect statement as to what evidence was produced before him. But if it is to be treated as a conclusion of fact based on a deliberate rejection of Mr. Norris' testimony, it is erroneous in law, because the defendants are entitled to the benefit of any evidence which the complainants produced, and have the right to rely on such evidence and to dispense with independent proof of the salability of the Everett skirt.

The fact is that the Everett skirts were about as salable as the Everett full figures, and the same reasoning which correctly led the Master to find nominal profits and damages as to the "full figure" applies with equal cogency to the "skirt."

The defendants protested, not only before the Master, but before Judge Shipman, against the manifest injustice of misrepresenting the admitted state of the record, and then arguing from that misrepresentation that the complainants were entitled to total profits and damages; but the Master contented himself with overruling the defendants' exception without any explanation, and the Court disposed of the matter by declaring that the "Everett form was a primitive affair which had a pretence of adjustability," and was not to be compared with the patented form. Record in No. 55, p. 385.

We submit the Court misconceived the issue raised by the exception. Whether or not the Everett skirt was adjustable to a practical extent is not the question, but the material fact

is that it sold in the same market with the complainants' forms in increasing numbers, and at a higher rate per annum, and to a larger total, than the defendants' skirts were sold.

It is, therefore, with deference to the Master, rank nonsense to say that these skirts did not have "any considerable sale or great market value": and if the Master and the Court choose to belittle the expansibility of these skirts and to class them commercially as solid, or substantially solid, skirts, the defendants are entitled to the benefit of the irresistible deduction that solid skirts were salable in the same market with the patented skirt: and to the equally irresistible conclusion that the entire salability of the defendants' skirt was not due to their expansibility.

The defendants claimed before the Master that the Everett form was in fact an adjustable form, and was sold as such; pointing to the evidence of Mr. Norris at page 316, record in No. 55.

> Int. 15. How many sizes of figures like Exhibit Everett Complete Form were required to meet the various sizes required in the dress form trade and how many did you actually make for that purpose?
>
> A. I don't know as I can answer that question, as it is worded. I can tell you how many sizes I made and kept in stock, which was four sizes and supposed to cover all ordinary demands, but both larger and smaller sizes were made when required.
>
> Int. 16. What were the dimensions of the minimum and maximum circumferences of each at the waist band, of the four sizes you kept in stock?
>
> A. No. 1, 20 was minimum and 28½ maximum; No. 2, 22 to 27½; No. 3, 24 to 30; No. 4, 26 to 32.

But the Master not only refused to give the defendants the benefit of the complainants' own testimony that each size was

sold to cover a range of about six inches adjustment of the waist, but found that the Everett form was practically without adjustment.

Clearly the complainant could not have been heard to contradict Mr. Norris on this point; and the Master's finding is to that extent erroneous in law.

The defendants have not excepted to this finding, because it put the complainants in the position of being compelled to admit that between 1881 and 1886 some 24,750 substantially solid skirts were sold in the market alongside of their patented skirt, at a total price of over $160,000; a position totally inconsistent with their claim that the defendants could not have sold solid—or substantially solid—skirts in the same market.

Now if the Master had boldly said that he did not believe Mr. Norris, we should have been entitled to a reversal of that finding on exception.

If he had found the fact that the Everett skirt was substantially solid, and was sold largely in the market, that would have overthrown the whole case on profits and damages.

If he had found, in accordance with the complainants' evidence, that the Everett skirt was an adjustable skirt and sold largely in the market, that would have put the patentee in his true light as an improver of the Everett form; and the absence of any apportionment of profits due to the improvement, would have involved a finding of nominal damages and profits.

But to find that the Everett skirt was substantially a solid skirt, and at the same time to find that there was "no evidence that solid skirts had any considerable sale or great market value," is not only incorrect in point of fact, but insufficient in law.

The patent, or at least the second claim of the patent, "is for an improvement and not for an entirely new machine or contrivance." Garretson vs. Clark, 111 U. S., 120.

In determining this question the form of the claim is controlling, since it is the patentee's own disclosure of his invention.

The second claim is not for the dress form; on the contrary, as already pointed out, a broad claim for a dress form expansible by means of braces was included in the original application, and was rejected.

The claim necessarily stands as for a combination which forms only a part of the dress forms which the patent describes, and it forms only a part of the forms which the defendants sold (except Baby Drapers).

Judge Shipman says in the final opinion (record in No. 55, fol. 584), that:

> "The second claim contained the entire new skirt form which was the skeleton frame radially adjusted in all directions from a common center by the described means."

But this statement is plainly erroneous in two particulars: first, in that it undertakes to give to the second claim the same construction and effect which the original rejected claim would have had; second, because it imports into the claim the alleged invention of expanding "in all directions" (i. e. in four parts), whereas the claim is neither expressed to be for any such invention, nor is the number of parts into which the ribs are separated anything more than a matter of constructive taste.

Neither does the claim include the use of single braces to adjust the lower ends of the ribs, which are used by complainants and by defendants, and are commercially necessary to any form which possesses ribs of the ordinary length. These single braces to adjust the lower ends of the ribs are old, as shown in the Wilson patent.

In such cases the patentee "must give evidence tending to separate or apportion the defendants' profits and the patentee's

damages between the patented feature and the unpatented features, and such evidence must be reliable and tangible, and not conjectural or speculative; or he must show by equally reliable and satisfactory evidence that the profits and damages are to be calculated on the whole machine, for the reason that the entire value of the whole machine, as a marketable article, is properly and legally attributable to the patented feature."

Garretson vs. Clark, (*supra*).

Now the precise point in controversy was, whether the entire salability of the defendants' forms was due to the presence of the complainants' adjusting mechanism at the hip.

A number of witnesses for the complainant, to wit: three complainants, two "exclusive selling agents" so-called, an employe of one of the agents, a Mr. Crane, who had just concluded a bargain with the complainant relative to trading in dress forms, a Mr. Ufford, who is the only commercial witness for the complainant on this point not directly interested in suppressing the defendants' business, and a mechanical expert; all testified with more or less readiness that in their judgment the success of the Knapp forms was due to their adjustability, and that if solid, they could not have been sold.

But since, as a matter of fact, skirt forms otherwise similar to the defendants' forms, but solid or substantially solid, were salable in the same market with the complainants' forms, these gentlemen are obviously wrong.

Mr. Ufford testified, speaking of the Hall and Knapp forms, that solid skirt forms were in fact salable, and thereby destroyed the force of the opinion drawn out of him on page 222.

> X. Int. 82. What opinion do the ladies give you from time to time when selling them the two forms in question?
>
> A. Some like one on account of peculiarities and some another.

X. Int. 83. Name the principal peculiarities.

A. With some ladies, space is everything, almost, and so some will choose the most compact, the majority, and that is the first thing that I ascertain as to their convenience. If told they have plenty of room, then some other kind is mentioned.

X. Int. 84. Please explain your meaning as definitely as you can, contained in the last clause of your last answer?

A. In that case we prefer to make them an individual form to their own size which does not expand, in which case we could give them a more graceful fit, our specialty being making forms to order.

X. Int. 85. Under whose patents do you make your special forms, when made to order?

A. They are not patentable.

Rec. in No. 55, p. 227.

And again on page 229:

X. Int. 100. (The answer is objected to as irresponsive, and the question repeated.)

A. In showing the Hall form I usually mentioned the convenience and compactness of it, ease of transportation, facility of forming any required size, the less cost; for demerit, want of gracefulness and shape, lack of firmness of the waist. As to the Knapp form, firmness of the waist line, facility of adjustment, symmetry in shape, substantial foot on castors—that is the substance of it. For individuals, where ladies have facilities for storage, we recommended our own manufacture, which cost less than either of the others, and gives a graceful, natural figure. This kind was not patented. Next was the Diamond, so called, which was rarely alluded to.

X. Int. 101. Did you keep the Diamond in stock while keeping the Hall and Knapp forms for sale?

A. Not usually, only occasionally.

X. Int. 102. Of what material were the special forms made by you, and how adjusted, if at all?

A. Those were skirt forms that I spoke of. They were made of wire. They were adjustable only in height.

The evidence of Mr. Norris has already been quoted. If the skirt forms sold by him were substantially solid, as the Master finds; then the proof that solid, or substantially solid, skirts were in fact salable is overwhelming, and it makes no difference that several interested witnesses say that they do not think so.

It was the duty of the Master not only to find the ultimate conclusion of fact as to the salability of solid skirts, but to follow the "tangible" evidence of actual sales, rather than the "conjectural" opinion of witnesses, who were obviously interested.

The only fact which would under the circumstances justify the conclusion that the entire market value of defendants' skirts was due to their adjustment, was the fact that similar skirts without such adjustment were not salable, and the burden of proof was on the complainant.

The Master has not found this fact, but has simply made a statement as to the state of the record, which would be immaterial and insufficient if it were true, and which, on his classification of the Everett skirt as a substantially solid skirt, is manifestly untrue.

The first and second exceptions were erroneously overruled, and the decree as to profits and damages should be reversed, and a decree directed awarding nominal damages only with costs to the appellants, in this Court and on the accounting.

The foregoing discussion includes the allowance of total profits, and an examination of the recent cases in which this Court has allowed the total profits of the defendant to be recovered will show that, in all but a single case, and that declared to be an exception, the claim of the patent undertook to cover the entire article sold by the defendant.

In Crosby Valve Co. vs. Safety Valve Co. the claim was in terms for "a valve with the circular or annular flange or lip," etc. It undertook in terms to cover the whole structure of "a valve" whenever it was provided with the patentee's apparatus, and the patentee's apparatus did in fact give the whole valve a new mode of operation as a mechanism, and did in fact cause the valve to control the escape of steam in a new and different way from other valves.

141 U. S., 441.

So in Hurlburt vs. Schillinger the claim was in terms for "a concrete pavement laid in detached blocks or sections, substantially in the manner shown and described." It covered the whole pavement, when laid in manner described, and the Court found that the invention was in fact as comprehensive as the claim, and that the patentee's pavement was a complete combination in itself and that if it had not been laid in that way it would not have been laid at all.

130 U. S., 456.

Callaghan vs. Myers, 128 U. S., 617, was a copyright case, and in the absence of any requirement that the author should define the extent of his copyright, as the claim of a patent defines the extent of the monopoly, the copyright attaches to the book as an entirety. In that case also the claim of the complainant was to the whole article as an entirety.

Elizabeth vs. Pavement Co. is of the same type. There were two claims: one for a process of making pavement in a certain way, and the other for "the formation of a pavement" by laying a foundation, employing blocks, strips to separate the blocks, and also the filling of the grooves between the blocks. This claim when construed to cover the result of

following its successive steps, covered in terms the whole pavement from foundation to filling, and the Court found the fact to be that the actual invention was co-extensive with the claim, saying: "Thus combined and arranged they made a new thing like a new chemical compound."

97 U. S., 126, 141.

But the complainant's patent cannot be construed to be for the whole dress form so as to bring the case within this class of authorities.

1st. Because the rejected claim for "a dress form" prevents it. A patent cannot be construed as if it still contained a claim which has been rejected and withdrawn.

Royer vs. Coupe, 146 U. S., 524, 532.
Roemer vs. Peddie, 132 U. S., 313, 317.

2d. Because the claim does not pretend to be for a dress form but for a combination of devices making only a part of the defendant's forms, with the exception of the baby draper.)

There is but one case, Mfg. Co. vs. Cowing, 105 U. S., 253, in which the Court went beyond the limit of the claim, and gave to the patentee the profit on that to which he had never asserted ownership. In effect the Court formulated a new claim to correspond with the actual invention, saying:

"While nominally he only made an improvement in pumps, he actually made an improved pump," and awarded entire defendant's profits, as if the claim had been for the whole pump so improved.

It was unnecessary for the Court to say, "This is an exceptional case."

The case turned on the proposition that the defendant could not have made any sales at all in the particular and limited market for oil well gas pumps, unless he had employed the patentee's invention.

And the Court concluded that therefore the total profit made by the defendant was due to the use of the patentee's improvement.

With very great deference we submit that this is a *non sequitur*.

It is true that the sale could not have been made without the patentee's invention; but it is also true that, since the patentee's invention did not, (in terms), cover the whole pump, the sale could not have been made without that portion of the pump which the patentee did not claim to own.

It is just as logical to attribute the total profits to one part of the device as to the other part, since each is the necessary complement of the other.

And this point will, we believe, appear to be well taken when it is considered that in these times of close competition a very slight alteration, if it tends to cheapen the cost of production, may turn the scale and enable one device rather than the other to hold the market.

If the rule is to be that total profits of the defendant's are recoverable irrespective of the form of the claim, whenever the improvement turns out to be commercially so superior as to drive out competition, there is no reason why, by successive improvements the total value of the same article may not be successively attributed to one patent after another.

We think it clear that where the patentee proves that the defendant could not have sold without employing the patented device, he thereby lays a good foundation (if the market is limited), for claiming that a sale made by the defendant is a sale lost by himself and for the recovery of damages for the loss of trade: *but that he ought, because of such proof, to recover as profits resulting from the use of his property, the proceeds of a sale of that which he has not claimed to own*, is a proposition which ignores the question whether the unpatented feature is not also necessary to make the sale; and

which appears to measure the property of the patentee by the uncertain effect of testimony pro. and con. of witnesses as to the conditions of successful competition, rather than by the statutory standard which the patentee is compelled to furnish for that very purpose.

In the case at bar there are, moreover, no facts corresponding with the peculiar circumstances of Mfg. Co. vs. Cowing. There is no limited market here, but the market is elastic and indefinitely receptive.

There is no proof that the patentee in this case drove out his competitors. The sales of the Everett form continued to increase until the defendant's forms appeared and the classification of dress forms made by Mr. Ufford clearly shows that there was a demand for a dress form having a more solid waist band, and a more perfect shape than the complainant's form offered, a demand which the Everett forms were calculated to supply as against the complainant's forms, which in their turn possessed greater adjustability, but at the sacrifice of shape and firmness. Into this field, which the Everett dress form successfully held as against the complainants, the defendants entered with a cheaper form which possessed all the excellencies of the Everett form, and it was not until then that the sales of the Everett forms decreased.

When Mr. Norris abandoned the old style of Everett form he adopted the Peerless, and the Peerless form although it costs more continues to be sold in competition with the defendant's and complainant's forms. Mr. Norris' evidence on this point is that the sale of the Peerless forms has "exceeded his most sanguine expectation."

Rec. in No. 55, p. 345, int. 59.

That "it has been pushed with great confidence expecting to regain lost ground and supersedes the sales of any other form" and that his expectations in this regard have not been disappointed.

Rec. in No. 55, p. 346, int. 72, 73.

Mr. Manchester testified as to the "Diamond forms," which were ruled by Judge Benedict not to be within the patent in suit, that "they are manufactured by our firm and sold extensively throughout the United States, Canada, South America and Europe, and pretty much all over."

Rec. in No. 55, p. 274, int. 49.

Mr. Crane, a witness for the complainant, testified that for the past two years his concern had marketed the entire product of the Diamond form, and that "we have branch stores established in a number of different cities, in which we market our goods, including the Diamond form, at retail. We also sell at retail in our principal place of business in New York City."

Rec. in No. 55, p. 307, int. 27.

It is certain, therefore, that, leaving out the solid skirt forms, which Mr. Ufford says that he and others make, the complainants had not, at the date when the Master made up his report, succeeded in driving out their competitors, but that there were at least two concerns whose volume of business was considerable who were then in the market.

The attempt to avoid the effect of these facts by declaring that there was no real competition between the complainant's and the Everett or Peerless, and the Diamond, but that the defendant's forms were the only real competitors of the complainant is not only too bald for human credence, but is based on the theory that the market was in some way sufficiently receptive and elastic to swallow the Everett, the Diamond and the patentee's forms without interference, and this is a theory which forbids the application of the doctrine of Mfg. Co. vs. Cowing.

The eighth exception explains itself:

8. The defendants except to the finding of the committee and Master that the plaintiff is entitled to recover in these actions as damages the total profit which the plaintiff would have made if he had sold to his prior customers, so-called, who had been purchasing from him, all the sales which the defend-

ants made to said customers, (*a*) because the Master and committee, having found that the defendants' additions and improvements enabled the defendants' skirts to sell more freely than the plaintiff's, ought not to find that the plaintiff would have sold to said customers as many as the defendants sold; (*b*) because, the plaintiff's skirt being made under three separate patents, the committee and Master ought not to allow the plaintiff in these actions, as damages, the total profit which he would have made from sales of skirt forms embodying such other patented improvements; (*c*) because the plaintiff's skirt, being made under four claims of the patent in suit, and the defendants' being found to infringe upon one claim only, the committee and Master ought not to allow the plaintiff in these actions, as damages, the total profit which he would have made from sales of skirt forms embodying the patented improvements described in the other claims.

(a)

The finding of the Master referred to is as follows:

"The defendants superadded to the complainants' combination in suit a firmer waist, a substantial foot on castors; also a very simple, convenient and valuable device for operating the expanding mechanism of it, consisting of a slow threaded screw on the central rod rotated or operated by a handle or knob at the top of the form, whereby the mechanism of the complainant's patent could be conveniently expanded to fit any form, and at all stages of the adjustment be securely and firmly locked and held in position, and in proper form. This device was an improvement for the operation of the plaintiff's device, which as organized in plaintiff's skirt operated by hand and with considerable inconvenience and required to be locked and held at all points desired by the use of several set screws.

The plaintiff's device was more valuable with this improvement added to it than without it, and defendants' forms embodying plaintiff's device so improved, in competition with the plaintiff's skirt form which did not contain the defendants' improvement, sold more freely than plaintiff's at slightly higher prices than plaintiff's."

The whole case on damages rests on the application of the inference that a sale to a prior customer of the plaintiff was a loss of a sale by the plaintiff. But this inference is not of invariable application. It is a proposition of fact and not a rule of law.

When two articles are of equal attractiveness and value, and sell at the same price in a limited market of which the complainant is in exclusive possession, there is a reasonable probability that a sale by the infringer displaces a sale by the patentee.

But there is no force in the proposition that if the purchaser had not bought the defendants' form he would have bought the inferior article made by the complainant. On the contrary the increased attractiveness and convenience of the defendants' forms suggests (and the Master so finds) that they sold "more freely" than the complainants'.

How then can it be inferred without contradicting this finding that every sale of a defendants' skirt to a customer (so-called) of complainant displaced a sale of one of complainants' skirts?

The finding of facts is inconsistent with the inference, and the complainant is not entitled to an inferential loss of sales, but must prove that such a loss in fact occurred. This he has not done.

(b)

The plaintiffs' skirts are stamped as made under three separate patents.

See Exhibit Complainant's Form.

Manifestly, the complainants cannot, as matter of law, recover the damages done to them by loss of sales of the patented features included in the form, and not the subject of the patent in suit. Otherwise, the complainant might recover total damages in this case; and, upon proof of infringement of a patent for a peculiar form of rib, his assignee, without notice, might recover more damages.

(c)

The same argument applies to the circumstance that the complainant's forms include the improvements described in other clauses of the patent in suit.

The next exceptions requiring special notice are those based on the peculiar relation of the complainant to the market, to wit: the 10th and 11th.

The damages, amounting to $9,029.14, were calculated on the theory that the complainant was deprived of sales.

The Master finds:

That the complainant's forms were mainly, three-quarters or more, sold by Ruel R. Appleton, or by himself, as Hall's Bazar Form Company, as the general selling agent of the complainant.

Mr. Appleton did business in his own name, and also as a "corporation sole," under the name of Hall's Bazar Form Co.

Record, p. 199, Ints. 42, 43.

The Master called him "a selling agent;" but the fact is stated as follows by Mr. Everet Morss, the son of the complainant:

> Int. 6. "During the period of the accounting what were the business relations between the complainant and Ruel R. Appleton, a witness in this case?"
>
> A. "Mr. Appleton is and has been our independent agent; that is to say, we have trusted him to sell the forms, excepting in New England, and we have worked together in many ways, *though Mr. Appleton buys the goods of us outright, and sells them direct to his customers.*"
>
> Int. 7. "How does the complainant deal with E. F. Bowen, a witness in this case?"

A. "In much the same way as with Mr. Appleton, but for a different territory and to a very much less extent."

Rec. in No. 55, p. 234.

To call a man who has some kind of a territorial right to sell probably exclusive, and who buys complainant's goods outright, an "agent," is an abuse of language.

Appleton was plainly a vendee or customer of the complainant; whether he was also an exclusive licensee for the purpose of selling the goods is uncertain, and therefore immaterial.

It is certain that he was the largest, and within his territory the only, customer of the complainant.

Now, the proof of alleged interference in trade was with customers of Appleton exclusively.

Rec., p. 196, Ints. 21, 22, and page 204.

There is no evidence that during the period of this accounting—from November 16th, 1886—the defendant ever sold a dress form to any one to whom the complainant sold a dress form within the same period.

The contention of the appellants is that they cannot be mulcted in damages for interference with Mr. Appleton's trade (who is not a party to the bill) unless some special proof is offered that damage to Appleton is damage to the complainant. There is no such proof.

Even if it were proper to assume without proof that some damage was inflicted on the complainant through Appleton yet the *quantum* of damage cannot be assumed to be the same as if the competition had been directly with the complainant, for the following reasons:

The "sale outright" to Appleton discharged the dress forms sold from the monopoly. They became then, ordinary articles of commerce in Appleton's hands, and a proper subject for competition, so far at least as Appleton is concerned.

Now, suppose that in such competition Appleton loses a sale. The particular dress form in question, has already been sold to Appleton, and the sale of that form cannot be lost by complainant.

Does it involve the loss of any corresponding sale by the complainant to Appleton? Manifestly the contract, which has not been produced, may determine that it does not. Perhaps Appleton is bound to take a certain number, or a certain proportion of the complainant's output. If so, the complainant is protected.

But if Appleton has his election whether to buy more or less dress forms, it is certainly impossible to argue that he will necessarily buy one, two or three, more or less, on account of making or not making a particular sale.

His conduct depends on his facilities, his capital, his opportunities for other investments, and upon such other influences as effect trade. Competition may stimulate him to develop new markets, and thus the injury to Appleton may turn out a benefit to the complainant.

The situation differs from direct competition with the complainant in principal, because the defendants did not come into competition with the complainant's goods *until after he had sold them to Appleton.*

There is no evidence that the complainant had any interest in any particular transaction between the defendants and one of Appleton's customers.

He could not lose the sale of a dress form which he had already "sold outright."

In such case, the "actual damage" to the complainant, if any, is measured by the indirect effect of the defendants' competition on the volume of Appleton's purchases from the complainant.

Whether the law will permit such indirect damage to be recovered is questionable. If the effect of second hand competition is to be regarded, why not third and fourth hand competition?

But at least there must be proof.

In this case there is no evidence that the volume of Appleton's purchases from the complainant decreased, or (if they increased) that the rate of increase was affected by the rise and fall of the defendants' trade, or that the price paid by Appleton to the complainant was affected thereby.

The whole case on damages is purely speculative, and rests on the assumption that a loss of ten sales by Appleton to B means, necessarily, a loss of ten sales by the complainant to Appleton.

We submit that no such inference is known to the law; and in the utter absence of any proof thereof the appellees submit that the decree awarding damages is erroneous and should be reversed.

The Court erred in overruling the 13th exception.

13. The defendants except for that the Master and committee should have found, that some portion of the sales made by the defendants to former customers of the plaintiffs displaced Everett and Diamond forms.

The facts as to the Everett forms have been stated. They are as follows:

1. That the sales of the Everett form were large and increased despite the presence of the patented form in the same market between 1881–1883, inclusive.

2. That from 1884–1887 the sales of the Everett form decreased about 25 per cent.

3. That Mr. Norris attributes the decrease to the introduction of the defendant's form.

4. That upon Mr. Ufford's classification of forms, the defendant's forms were peculiarly calculated to displace the Everett form.

5. That the actual sales of the defendant's forms were sufficient to account for the decrease in the Everett sales.

6. That the defendant's forms were sold in the same market with the Everett forms.

7. There is no claim that the rise of defendant's trade was accompanied by any diminution of the volume of complainant's business.

On these facts the preponderance of proof forces the conclusion that the defendant's forms displaced Everett forms rather than complainant's forms; and since there is no proof that complainant's so-called customers were exclusive dealers in the patented form, there is no reason for assuming, in the absence of any proof and in defiance of the probability suggested by the facts above stated, that every sale of a defendant's form displaced a patented form and no such sale displaced an Everett form.

The same argument applies to the Diamond form, though with less force, because in the case of that form there is no evidence as in the case of the Everett that the rise of the defendant's sales was accompanied by a commensurate fall of the Everett sales.

IV.

The 15th and 16th exceptions are properly considered in connection with the 4th reason of appeal, to wit:

Because the Court erred in assessing damages on the theory that five-ninths of the sales claimed to have been lost by complainant would have been "iron-post" forms.

The complainants made two styles of skirt forms: an "iron post" form on which they claim a profit of $1.14, and a "wood post" form on which they claim a profit of 87 cents.

In computing damages arising from alleged loss of sales, the question arose whether the sales lost were to be treated as sales of "iron post" or "wood post" forms; and the Master found:

> "As there is no certain proof of the number of each kind there would have been in such number of sales, I shall find that he (complainant) would certainly have made the first named or least profit.
>
> Rec. No. 55, p. 368.

Accordingly the Master figured the damages as if all the sales lost by the complainant had been sales of "wood post" skirts at a profit of 87 cents.

This was in accordance with the defendant's claim, that the complainants were bound to take their least profit unless they could prove that the "iron post" forms would have constituted some certain proportion of the sales lost by reason of defendant's competition.

The exceptions relate to the further finding of the Master that the proportion of iron post to wood post sales had been "heretofore" as five to four; and that it was a fair inference that the sales lost to the complainants by defendant's competition were in the same proportion.

The Court overruled these exceptions and adopted the inference and increased the damages to the tune of $1,146.15, on the theory that there was some proof that the sale of nine forms by the defendant displaced four wood post and five iron post forms of the complainants. But there is no such proof, nor is there any ground for drawing from the fact that the complainant's sales of these two styles were in a certain ratio, any inference as to which of these styles will be most affected by the competition of a third article.

Probably the inference which the Master drew was that if the defendants had not come into the market the sales of complainant's forms would have continued in the same ratio as they had been before.

This is not the point. The defendants did come into the market, and the issue is as to the actual relative effect of defendant's sales on the sales of iron and wood post forms, respectively. That this question depends altogether on the character and price of the defendant's form and not at all on the ratio in which complainants previously sold iron and wood post forms is too plain to require argument. If any inference can be drawn at all, it is that outside competition would most seriously affect that style which was least popular, i. e., the wood post form.

Moreover the ratio is either wrongly stated or else it fluctuated widely. We have the figures for 1887. They are

Wood post	17,076
Iron post	16,551

or in the ratio of 34 wood post to 33 iron post forms.

Rec. in No. 55, p. 189, and correction at p. 234, int. 2.

The period of the accounting began in December, 1886, and the witness testified in August, 1888.

In order therefore to bring the total sales from Dec. 1886, to Aug. 1888, to correspond with the ratio stated it is necessary to assume a marked relative increase in the sales of iron post forms.

For example: assume the sales of skirts for the other eight months, excluding 1887, to have been 29,373, which will serve as well as any other figure the purpose of illustration. The relative sales will then appear as follows:

	Wood post.	Iron post.	Ratio of wood to iron.
1887	17,076	16,551	34 : 33
The other 8 months	10,924	18,449	11 : 18
Total	28,000	35,000	4 : 5

It is plain that if the defendant's forms affected the complainant's trade at all they displaced in 1888 (when the competition is said to have been hottest) a great many more wood

post than iron post forms, and this indicates that the Master's inference was not only illogical in theory but was probably wrong in fact. We submit that the increase of damages based on this fanciful theory was erroneous.

V.

The Court erred in increasing the damages on the ground that between Feb. 23, 1888, and March 30, 1888, the defendants were acting "willfully." Record in No. 55, p. 387.

On page 55 of the record in No. 55 will be found a copy of the preliminary injunction in this case which was granted on the 28th day of March, 1888, and at the end of that injunction will be found these words:

"But the service of this writ of injunction shall be stayed until twelve o'clock noon on the 17th day of April, 1888."

Signed, N. SHIPMAN,
District Judge.

To what end was the service of injunction stayed except to allow the defendants to sell their dress forms in the interval? And why should the defendants who asked for and obtained the stay for that very purpose be punished for doing that which the Court permitted them and encouraged them to do?

It is impossible to say what part of the increase of $250 in damages was assessed for the "willfull" conduct of the defendants in this interval of time, and what part should be assumed to belong to the interval between August 25, 1888, and Jan. 1, 1889. The Court lumped the increase of damages to cover both intervals.

The injustice of punishing the defendants for acting willfully when they were doing only that which the Court, after argument, permitted, is apparent and if the increase is not severable it should be wholly abated.

The decree in each case should be reversed.

JOHN KIMBERLY BEACH,
of Counsel.

150-221

Supreme Court of the [illegible]

OCTOBER TERM, 1892.

WILLIAM H. KNAPP AND CHARLES L. KNAPP,
APPELLANTS,

v.

CHARLES A. MORSS, APPELLEE.
IN EQUITY.

TERM No. 286.

SAMUEL N. UFFORD, APPELLANT,

v.

CHARLES A. MORSS, APPELLEE.
IN EQUITY.

Brief on behalf of Appellee,

PAYSON E. TUCKER,
CHARLES F. PERKINS,
of Counsel.

BOSTON:
THE COLLINS PRESS.
1893.

United States Supreme Court.

TERM No. 286.

WILLIAM H. KNAPP *et al.*, *Appellants*, *v.* CHARLES A. MORSS, *Appellee*.	In Equity.
SAMUEL N. UFFORD *et al.*, *Appellants*, *v.* CHARLES A. MORSS, *Appellee*.	In Equity.

These two cases are appeals from decrees upon bills in equity brought in different circuits for alleged infringement of the same patent by the manufacture and sale of the same articles. The infringement complained of was the infringement of the second claim of Letters Patent No. 233,240, issued to John Hall, Oct. 12, 1880, for improvement in dress forms, which patent was assigned to the appellee, Charles A. Morss, April 27, 1886.

The appellants, W. H. Knapp *et al.*, were the Connecticut manufacturers of the alleged infringing articles, and the appellants, Samuel N. Ufford *et al.*, were the Boston retail sellers of the same.

The appellants in both cases appeared by the same counsel, and the appellee employed the same counsel in each case, and it was agreed by said counsel that the evidence taken in each case might be used in both.

The case of Morss *v.* Ufford, as it was then entitled, was brought in the Massachusetts District of the First Circuit, and was the first to be tried. Only one kind of form made by the Knapps was shown to have been sold by Ufford. That was the kind marked "Complainant's Exhibit Defendants' Dress Form." This case was tried before Judge Colt, who sustained the patent, found that the defendant Ufford had infringed said second claim, ordered an injunction and an accounting, and

afterwards entered a final decree in favor of the plaintiff. The opinion of Judge Colt is reported in 34 Fed. Rep., p. 37.

The suit against Knapp *et al.* was brought by Morss in the Connecticut District of the Second Circuit, and was heard by Judge Shipman.

As it appeared that the Knapps actively defended the suit *v.* Ufford in the First Circuit, the Court in the Second Circuit held that they were estopped to deny the validity of the patent, and the infringement by the manufacture and sale of said Exhibit Defendants' Dress Form, and ordered an injunction and accounting, and the case was sent to Mr. Marvin, Clerk for the District of Connecticut as a master. Two actions at law also brought by Morss in the Circuit Court for the District of Connecticut against the same defendants for infringement of the same claim of the same patent, and then pending, were also sent at the same time by the Court under the Connecticut practice to Mr. Marvin as a committee to assess damages.

Somewhat later Morss complained in the equity suit against the Knapps in the District of Connecticut, that the Knapps had violated the injunction of the Court by making and selling a style of dress form called their "New Style Dress Form," somewhat different from Exhibit Defendants' Dress Form, and being what was afterward marked in the accounting "Defendants' Form C." In consequence of this complaint it became necessary for Judge Shipman to analyze the Hall patent. His opinion is given, Record, p. 102.

At the hearing before Mr. Marvin as master, it was shown that the defendants Knapp had made and sold, besides complete forms and skirts like Exhibit Defendants' Dress Form, four other styles of forms respectively like Exhibit Defendants' Form A, Exhibit Defendants' Form B, Exhibit Defendants' Form C, and Exhibit Baby Draper, each of which was found against appellants' objections, both by the master and by the Court at the hearing upon the master's report, to be an infringement of said second claim of said patent.

The measure of damages adopted by the master was also sustained by the Court, against the appellants' objection.

We have therefore to consider in this case the validity of the patent and its scope; the infringement by the appellants by each of the six varieties of forms made and sold by them;

and the legality and applicability of the measure of damages adopted by the Court.

THE DRESS FORM.

A practical dress form is an article used in draping dresses, and is intended to resemble the human form in its outline as nearly as possible, so that a dress of soft material hung upon it shall look as it would upon the human figure. The woman whose dress it is carrying is thereby enabled to see the dress before her as it will appear upon her own person, and thus to judge of the effect of the drapery with which she is adorning it, during the whole of the time it is being draped. Dressmakers use them for their customers, who are thereby relieved of the fatigue of wearing the garment while this process is in progress, and they are used extensively in households by ladies who make or trim their own dresses.

The advantages of such articles as regards the various members of a household, or the various customers of a dressmaker, could be obtained, prior to the Hall patent, only by having a separate unadjustable figure for each woman or child in the case of a household, or each set of customers of about the same size in the case of the dressmaker.

Solid figures for these purposes were always more or less in use. But these dummies were costly, and as a rule were but little used except for display purposes in shops. An adjustable form, which could be used for many persons and be adapted equally well for each, was a desideratum not yet gained.

NATURE OF THE INVENTION OF PATENT IN SUIT.

The required article was furnished by the inventor, to whom was granted the patent in suit.

Briefly described, it consists of a framework of strips of thin springy material which has the outline shape of a lady's dress. It is capable of being contracted or expanded so as to change its diameter and still preserve its symmetrical appearance, as such expansion or contraction affects the whole framework equally from top to bottom, and is relatively the same at each point. The strips of thin springy material composing this framework are marked *c* in the drawings of the patent (Record,

p. 28), and are referred to by that letter throughout the specification. They are called "ribs *c*, *c*," and wherever mentioned in that way refer to the *framework as a whole*. This framework is supported on an upright post marked *a*, which has a pedestal marked *b*.

The *framework* is the dress form. To be capable of being expanded and contracted and of being used at any point of contraction or expansion, as if it were solid or made throughout of wires rigidly bound together, proper adjusting mechanism must be added.

This mechanism consists in part of swinging braces, or links as they are sometimes called, marked e^2 in the drawings. There are two series of these, of which, as shown in the drawings annexed to the specification, one set inclines downwards and the other upwards. It will be seen that, owing to the fact that these double braces are inclined at different angles, when the inner ends of each are secured upon the standard so that they cannot move up or down, the framework to which the outer ends are attached will be held against contraction or collapse by inward pressure exerted by the weight of the dress or by the elasticity of the material of which it is made.

The resistance to inward pressure is effected by the action of the two sets of braces against each other, or by their *opposition in action* as it is sometimes termed, and operates at the point where the action of each brace meets and modifies that of the other. The result of this action is to resist any inward pressure at this point as effectively as if a rigid bar rigidly fixed to the standard were employed at that point.

It is obvious that the braces must be hinged at their inner and outer ends or it will be impossible to expand or contract the framework by means of them. A rigid bar rigidly attached cannot be used because with it there can be no adjustment. It is also clear that hinged or swinging braces if parallel with each other would offer no resistance to inward pressure for any such reason as is above given. They would operate simply as a single brace, and would be forced in at once by such pressure. There would be no opposition in action. Therefore to obtain the effect of this opposition in action the braces or links must depart to some extent from parallel lines to perform the function of the double braces. They need depart but slightly from parallel lines, because the slightest convergence to-

wards each other will operate to hold the framework against collapse.

It is also true, as will hereafter be more fully shown, that it is not essential that the double braces should be located at the point shown in the drawings. They may be located at any point throughout the length of the framework, as it is only necessary to fix *one part* of the framework against collapse by inward pressure to make *an operative* dress form, and to enable whatever additional firmness or elasticity may be desired to be imparted to it by other means.

To allow these double braces to be thrown out from the standard and drawn back from it so as to make the framework adjustable to different sizes of dresses, and to enable the operator to set them firmly when the desired size is obtained, still additional mechanism is required.

This consists in pivoting the double braces e^2 to collars marked f^1, f^2, which are vertically adjustable upon the central post. By moving these collars to or from each other the inner end of the braces e^2 are caused to approach or recede from each other, and thereby permit the framework to which they are attached to contract toward or to expand from the standard. When the framework is adjusted to the size of the dress, then the collars f^1, f^2 are prevented from moving farther apart by means of collars h^1, h^2, and the same effect is produced as if the braces were rigidly fixed to the post.

The several parts whose functions we have enumerated comprise the essental requisites of an adjustable dress form, and are the elements enumerated in the second claim of the patent in suit, being the one which, it is alleged, the defendants have embodied in their dress form.

There are other incidental features of the Hall dress form, such as a single set of braces e, which operate as stiffeners at the bottom of the form, and also to enable a local adjustment of particular ribs at the bottom of the skirt if desired. There are also elastic bands d, one at the bottom and one at the top of the framework, which limit the expansion of the framework when the form is not in use. These devices are conveniences, but are not requisites to the operative character of the dress form.

The real invention of the Hall patent is very clearly set forth by Judge Shipman in his opinion in a petition for attach-

ment for contempt against the appellants in this case, wherein the appellee was the petitioner. (Record, p. 103.) (The italics are our own.)

"The invention is an improved dress form by means of which every part of the device is rendered adjustable, so that it may be applied to a dress of any size or style and fill it out perfectly. *The principle of the invention is the expansion or adjustment of a skeleton frame radially in all directions from a common centre.* A central pole or standard supports the entire form. In the part which supports the skirt upright, these elastic ribs are held towards the standard by elastic bands secured on each rib. There are two series of oppositely inclined braces, one above the other; those of the upper series are hung by their inner ends to a collar on the standard, and extending obliquely downward, are hinged to the respective ribs. The braces of the lower series are hinged by their inner ends to a lower collar on the standard, and, extending obliquely upward, are hinged to the ribs at the point where the members of the upper series are hinged. The two collars, called sliding blocks, are adjustable. When the form requires expansion, the lower collar is elevated, which expands the lower series, but this expansion is governed by the opposing action of the upper series, which compels the movement of the ribs to be substantially parallel with the central standard."

The combination described and claimed in the second claim is the essential part of the whole patent, for by it alone an operative dress form can be made, while without a single element of that claim, no adjustable dress form can be made; so far as we know the dress form is inoperative.

The dress form described in the patent is divided into two parts, the waist form and skirt form, in each of which appears the same invention set forth in the second claim. The suits before the court were brought on this second claim only, and it is with that alone we have to deal. The other claims relate to particular adjustments of special portions of the figure, and are not now in controversy.

CLAIM IN SUIT.

Second claim of Hall patent No. 233,240: "In combination with the standard a and ribs c, the double braces e^2, sliding

blocks f^1, f^2 and rests h^1, h^2, substantially as and for the purposes set forth."

Excepting the "ribs c" or the skirt form itself, the elements of this claim are old. No novelty can be claimed for them separately considered, and there were several well-known equivalents for each of them.

The standard a is an ordinary upright pole which simply serves to support the rest of the structure. There is no novelty in this standard. Any common upright post would be a substitute for it.

The second element of the claim is the ribs c. These do constitute a new feature and part.

The word is used in the claim in the plural number, and it was necessary to refer to the ribs by the letter c of the drawing to distinguish them from the ribs of the bust portion. There are no other words of limitation. The "ribs c," which must mean *all* the ribs c, are the component parts of the skirt form, and therefore the synonym for it. Their office is to support the dress and impart form to it. Separate ribs so assembled as to perform this function, and yet be capable of expansion or contraction from or towards a common centre, are new in this patent.

The braces e^2 are those upon which the ribs are suspended, and by the movement of which the framework is adjusted. It will be observed that the outer ends of each pair are attached to the rib at nearly but not quite the same point in the drawings of the patent. They nearly touch each other, but do not quite do so. The point of attachment, however, is immaterial to their operation.

The blocks f^1, f^2 are ordinary collars or sleeves supporting the inner ends of the braces upon the standard, capable of being moved up and down upon the standard and swivel upon the standard.

The rests h^1, h^2 are means for keeping the collars f^1, f^2 at any desired point on the standard.

In this combination we therefore have,

1. A framework having the shape of a lady's dress so supported and arranged that it can be expanded or contracted radially from a centre through its whole length.

2. A standard to support the whole structure and act as the radial point.

3. Double braces to expand or contract the framework and hold it expanded or contracted.

4. Sliding blocks on the standard so that the dress form can be swivelled and one of which can be moved up and down so as to throw out or draw in the braces.

5. Rests to hold the blocks in any desired relative position on the standard.

The union of the five mechanical parts named in the claim constitutes an operative dress form.

The second claim is therefore "for a dress form." The appellants seek to reduce this claim to a mere aggregation of five things, without any reference to the new entity which they compose, and then to scrutinize every mechanical art, from umbrellas to reels, to see if, separately considered, each part can be found somewhere under the sun. That is unnecessary, because we have always admitted that a rib, a brace, collars, and post can be found, but we deny that a collection of ribs, forming as an entirety "a skeleton frame radially adjustable in all directions," was ever known, and we have challenged the appellants through years of litigation to find it. The conception of such a framework as a whole, and uniting it with braces and collars to operate it, constitutes an invention of a high order. The framework as a whole is at one movement of collars and braces expanded or contracted to any extent. Such a result was never known. A single stick, or so-called rib, had been moved to and fro on a rigid horizontal arm; a half section of a dress form had been pulled away from the other on a horizontal arm, thereby distorting the shape; but no frame, as a whole, had ever been made adjustable to all sizes, without change of shape.

It is quite immaterial, of course, so far as the patentability of a combination is concerned, whether its component parts are old or new, if new functions are obtained by it, or a new article results from it.

Parker *v.* Booth, 102 U. S. 96.
Loom Co. *v.* Higgins, 105 U. S. 580.

If the Court shall find, therefore, that this combination represents the first dress form radially and symmetrically adjustable in all directions from its centre, it is not only a patentable, but a primary invention, and entitled not only to protection, but to a broad construction.

DEFENCES.

a. Inoperativeness.

The appellants claimed in the court below that the second claim was inoperative, and hence useless, because, as they say, if a structure is composed of the five elements of this claim only, and not combined with other parts of the appellee's device, as shown in the specification and drawings, and is set up by hand and then the hand is removed, the structure, or all of it except the standard, will fall to the ground.

It is true that such might be the case, if it were desired to accomplish that result *when the form is not in use*, because the upper rest h^2, while it prevents the upper sliding block f^2 from rising higher upon the standard, would not keep it from falling; and if the upper sliding block f^2 did not fit the standard in the case supposed, it might slide down upon the standard till it reached the lower sliding block carrying its braces with it and causing a collapse of the form.

In the patent the tendency to fall is prevented by the two tapes or bands *d*, *d*, which hold the ribs *c*, *c*, towards the standard.

Specification of patent in suit, Record, p. 28.

These are not an element of the second claim, and it is the contention of the appellants that the claim describes a useless article, unless these bands or their equivalents are used.

There are several answers to this defence of uselessness, either of which is sufficient: —

First. — It depends upon the the way in which sliding block f^2 fits the standard. It may fit it loosely enough to be capable of being moved up and down or of swivelling upon it, and yet closely enough not to be moved down by gravity only.

Second. — It is only when the *dress form is not in* use that it *can* fall in the manner suggested, even if the upper collar f^2 is loose enough to fall by gravity alone. Put a skirt over it, and the double braces will expand only to the point where they meet the dress. The dress binds them, operating to prevent expansion, while the double braces prevent contraction, and the form is perfectly adjusted and held in that position.

Dep. R. R. Appleton, Record, p. 161, Ints. 96–116.

Third. — Because there is no doubt that an operative device is shown in the *patent*, and that being done, it is not necessary

to include in the *claim* all the parts which may be necessary to make the device operative.

Loom Co. *v.* Higgins, 105 U. S. 591.

The precise question raised was considered and decided in Forbush *v.* Cook *et al.*, reported in 2 Fisher, 668. It was contended by the respondents in that cause that a valid claim for certain elements could not be made because no practical result could be obtained without the assistance of a certain other element.

Justice Curtis, in charging the jury, said : —

"Nor is it requisite to include in the claim for a combination as elements thereof all parts of a machine which are necessary to its action, save as they may be understood as entering into the mode of combining and arranging the elements of the combination. If inclined wires are necessary to the action of the combination specified, so are many other parts of the machine, and all parts necessary to the action of the combination specified might be said to enter into the mode of combining and arranging the elements of the combination, but need not be and ought not to be included in the combination claimed."

b. Anticipation.

It is contended in further defence that the Hall patent was anticipated by previously patented devices.

The following patents were put in evidence by the appellants prior to the reference to the master : —

No. 167,393. Charles Franke, improvement in pantaloon formers.

No. 167,394. Charles Franke, improvement in apparatus for shaping coats.

No. 202,713. George W. Everett, improvement in skirt exhibitors.

No. 207,351. Sherwood B. Ferris, improvement in corset exhibitors.

No. 68,831. F. A. Balch, improvement in reels.

No. 102,638. Charles C. Wilson, improvement in formers for hoop skirts.

The following additional patents were put in evidence at the accounting before the master : —

No. 70,631. Shaw, improvements in umbrellas.

No. 66,632. Horace F. Robbins, improvement in umbrellas.

No. 180,517. Geo. B. Kirkham, improvement in umbrellas.

FRANKE PATENTS.

The Franke patents are for holding and pressing coats and trousers.

They do not contain the ribs of the Hall patent. The adjustable pieces are hinged at one end and cannot be expanded their whole length. No expansion at all is possible where they are hinged.

The essence of the Hall patent *is radial expansion of the skeleton frame*. That is impossible with any such devices as are shown in these patents.

Neither the double braces nor anything like them can be found in them.

Here, as in every patent referred to by the appellants prior to the Hall patent, change of size necessarily causes change of shape.

EVERETT PATENT AND FORM.

The only dress form in *any* way adjustable which was known before the Hall invention was the Everett form, made by Mr. Norris, as appears by his evidence at the accounting, under the Everett patent.

This was a device with a waist block to hang a skirt on for the form, and a tripod to support the block. It is called in the patent a "skirt holder." Its only adjustability consisted in the fact that the waist block was made in two parts, which could be pulled away from each other sideways, like the two parts of a hat block. This made a lateral adjustment possible, but the moment the block was parted at all there came a change of shape as well as of size, and each further expansion made it more and more unlike the human form and its own original shape.

The owner of this patent added to the two parts of the block ribs solidly attached to those two parts and moving as they were moved. This made a dress form in two parts, which was capable of the same adjustment shown in the Everett patent, but of no other. Within certain limits the Everett form was imperfectly available. But the limits of this imperfect adjustment were so soon reached that to meet the wants of customers four sizes had to be manufactured, and kept in stock, each size adjustable only in the way already mentioned, and larger and smaller sizes when required. (Record, p. 319, Int. 15.)

It is evident that this figure, which at the least expansion must cease to resemble the figure of a woman, and with continued expansion must soon become an uncouth caricature of it, did not in any manner resemble the Hall figure or occupy the place in the needs of the community which the latter filled. It was simply a solid figure, split in two from front to rear, the two parts of which were so held by a rod that they could be separated to a certain extent without entirely falling asunder.

The mode of operation and result in this form and patent are entirely different from those in the Hall form and patent.

FERRIS PATENT.

There are no ribs like those in the Hall patent, which are so arranged that the whole structure can be expanded or contracted at pleasure, giving shape to the article at will. This structure consists essentially of two umbrella frames, one being inverted and placed on top of the other so that their apexes are in contact.

This is a mere *stuffing* device to distend the corset to its fullest capacity, more convenient to use than sand or paper, but producing no other result. *It has no framework the shape of which it imparts to the corset; the corset rather moulds the shape of the flexible framework of the device.*

BALCH PATENT.

There is contained in this article the expanding device of the patent in suit. The opposing braces and the clips or hands to which they are pivoted are similar to the double braces and the clips in the patent. But where is the *framework*, or any suggestion of it? The framework of the Hall patent is a complete thing secured to the clips on the ends of the braces, and is the *sine qua non* of the patent. *The chief element of the patent is totally lacking in the Balch reel. There is nothing to give form or shape.*

The expanding and contracting mechanism used by Hall is undoubtedly contained in this patent, *but it is not combined with the skeleton or dress form itself.*

WILSON PATENT.

This patent is not alleged by appellants' expert to contain the second claim of the Hall patent, which is the only one in controversy. He likens it merely to "the lower adjusting device of the plaintiff's form." (Record, p. 38; original, p. 67.)

There are several differences at once apparent. The ribs in the Wilson patent are not like those in the Hall patent. They are hinged to two parts of a block, and are only adjustable in two directions by moving the rear half of the block and the ribs attached to it away from the other half of the block and the ribs attached to that, which would at once destroy the symmetry of a dress skirt. The double braces are not present. There is but a single collar or rest. When the rest is placed in position, as appellants' expert expresses, "by a set-screw through it bearing directly upon the standard instead of by an independent adjustable collar as in the complainant's patent" (Record, p. 38; original, p. 67), it is evident the hoop-skirt holder cannot be revolved about the standard.

This device is designed to determine only the *diameter* of a rigid wire-work structure composed of hoops which are *circles* in themselves. It is not designed to, and could not itself, impart a circular form to a loose material or garment. *The way* in which the device is enlarged shows its purpose. It simply increases *one diameter*, namely, from front to rear.

SHAW, ROBBINS AND KIRKHAM PATENTS.

These are all patents relating to umbrellas.

The same is true here that is said of the Balch reel. There is no *framework or dress form*. There are opposing braces in umbrellas, one of which is longer than the other, and is covered with cloth, but there is no dress form or framework of any kind secured to these braces. *The double braces alone are as far from being the invention of the patent as the standard is or any other element of the claim.*

The shape of the umbrella changes with each particle of expansion. It is a cylinder when closed, and a flattened cone when expanded.

An examination of these prior patents shows that no one of them possessed the distinctive feature of the Hall invention,

which is *a complete expansible form, preserving at all sizes its proportionate contour.*

The novelities of the Hall patent are very well grouped by Mr. Shepard in his deposition on p. 14 of the Record in answer to Int. 2.

We adopt as our own and present as a compact and brief review of the patents offered the following extract from an affidavit made by an expert upon proceedings, upon petition for an attachment for contempt in another action:—

"I find that there is an essential difference between the device of the complainant's patent, and all the devices which I have heretofore known for the purpose of shaping garments of any kind, *in that the device of the patent possesses a structure which, as an entirety, is expansible radially in all directions from a common centre, and thereby preserves the symmetry of the form, whatever its diameter may be;* whereas, in the other devices shown in the record in this case, such as the Wilson, which is designed to support a hoop skirt, and the Franke patents, which are designed to support coats and pantaloons, the form is divided into halves, and one half is pulled away from the other, thereby increasing the diameter in one way only, which construction and operation in a dress form would destroy and deprive it of its chief value. I do not consider that the patent to Balch for a reel has any relation whatever to the art to which the device of the complainant's patent belongs, because the chief ingredient of the device of the complainant's patent, namely, a structure capable of imparting its form to the fabric placed upon it, is entirely wanting. There is nothing in it to suggest the invention of the complainant's patent. I do not find in any of the prior patents referred to by the defendants' expert, *a device having a structure designed to impart its form to something else, which structure as an entirety is capable of radial adjustment in all directions from a common centre.*"

INFRINGEMENT.

At the hearing before the Circuit Court for the District of Massachusetts in the case of Morss *v.* Ufford *et al.*, the evidence of infringement upon which the complainant relied

was the admitted sale of the Complainant's Exhibit Defendants' Dress Form.

At the hearing before the master, for convenience two exhibits were filed in place of this exhibit, showing the alleged infringement both in forms with and without the bust portion. One of these, marked "Defendants' Complete Dress Form," is a fac-simile of the Exhibit Defendants' Dress Form.

Dep. of Everett Morss, Record, p. 105, Ints. 6–10.

The other exhibit is marked "Exhibit Skirt Form."

Everett Morss, Record, p. 106, Int. 10.
W. H. Knapp, Record, p. 107, Int. 4
Record, p. 204; bottom of original p. 323.
Record p. 120, at end of Int. 28.

At the hearing before the master, four other varieties of dress forms were shown to have been made and sold by the appellants. These were marked respectively Exhibit Defendants' Form A, Exhibit Defendants' Form B, Exhibit Defendants' Form C, Exhibit Baby Draper. (Record, p. 164; original p. 268.) Exhibit Baby Draper was put in evidence towards the close of the accounting.

FILE WRAPPER OF PATENT IN SUIT.

Before analyzing the patent in suit further and comparing the different successive devices adopted by the Knapps whereby they have attempted from time to time to evade it, we wish to call the attention of the Court to the file wrapper and contents of the Hall patent which the appellants seem to think in some way limit the claims which were granted.

The proceedings in the Patent Office do not in our opinion affect this case at all.

The rejected first claim covered any kind of adjustable ribs, adjustable in whole or in part and at any portion of their length, and any kind of braces, single as well as double, which were hinged to sliding blocks and had their outer ends connected with ribs.

This was too broad a claim evidently. It would include such a device as that described in the Wilson patent; and the same is true of the original second claim.

But the fourth, now second, differs widely from the first

claim, was unquestioned, and remained a good and valid claim. The invention was evidently carefully scrutinized at the Patent Office and was passed. It is not contended by the appellee that the claim in controversy contains the combination of the *rejected claim*, and it is impossible to understand what bearing the rejection can have on this case.

If the patent describes and this claim covers an entirely new article, as we believe it does, the patentee is *not* to be limited in its interpretation because *he once thought and claimed that he was entitled to something further, in the rejection of which he acquiesced.*

APPELLANTS' DRESS FORMS.

As we have before said, there are two exhibits in this case, called respectively Defendants' Complete Dress Form (which is a duplicate of Exhibit Defendants' Dress Form) and Defendants' Skirt Form, which have exactly the same form of expanding devices. In the former they are applied to a complete dress form, and in the later to a skirt form.

Compare these with the second claim of the patent in suit.

1st. Is the same *result* obtained in the appellants' device, which is attained by the second claim of the Hall patent? Clearly it is.

The patentee's, Hall's, idea was to construct a dress form adjustable to every size, and always preserving the *proportionate contour throughout*, so as to enable ladies to make and drape their own dresses without assistance, and save the time and fatigue incident to frequently trying them on. Something that a dressmaker can use for all her customers, and that all the ladies of a household can use in common. Something that will enable ladies to view their dresses as they appear upon themselves, and "see ourselves as others see us." This was the result aimed at and accomplished. This is also the precise result obtained by the defendants' device.

The Hall patent accomplishes, as to the skirt, two results. By the *double* braces it moves out and expands the ribs throughout their entire length. By means of the *single* braces it expands the lower part of the form further, or one rib at a time if that be preferred.

But for the purposes of this case we consider the *double* braces alone. They move out and expand the portion around

the hips directly, but *they also expand the whole form.* It is only when additional expansion or contraction is needed for the lower part, or for one rib of the lower part, that the single braces are needed at all.

Deposition of Shepard. (Record, p. 25.)

Int. 38. "Does the operation of the double braces, as contemplated by the patent, expand and contract the *entire* dress form?"

Ans. "Yes, to a certain extent, although they are principally designed to contract and expand the upper end of the skirt form, provided a lower set of braces is used in connection therewith, whose principal office is to expand and contract the lower end. If such lower set is not employed then these same double set of braces at the upper ends of the skirt form may be made to serve as the sole means for expanding and contracting the entire skirt form."

Cross-Int. 41. "Do you mean that in a dress form constructed in all respects like that shown in the patent in suit, the lower set of braces is unnecessary, in your judgment?"

Ans. "Yes."

How the double braces operate alone without any single braces can be seen in the Exhibit Baby Draper.

The exact result of the patented invention is obtained in appellants' device. And any supposed gain in moving out the lower portion of appellants' device evidently comes from the lower or single braces, which we do not contend interfere with the second claim.

But if the result gained by the double braces in the Hall patent were simply to move out the hip portion, and the appellants' device moved out the hip portion and the lower portion also, it would not the less follow that the same result, viz., the moving out the hip portion, was gained in the two cases, because the appellants gained another result in addition, namely, moving out the lower portion as well.

And it would not the less be an infringement because he moved out the lower portion *better*, if such were the case.

This result, then, namely, adjusting the form and at the hip only, or adjusting the whole skirt form, is gained by each device.

2d. Is the result accomplished in the same way?

In appellants' form there is a standard which corresponds to Hall's standard, and ribs of a form designed to impart shape to a dress and so arranged as to be adjustable through their entire length.

The appellants will hardly seriously contend that their device does not contain the "ribs c" and "braces e^2, e^2" of the claim in controversy.

The appellants' expert says (the italics are our own) (Record, p. 33; original, p. 56): —

"Comparing defendants' form with the form described in the complainant's patent and alleged invention recited in the second claim thereof, I find that in defendants' form there are a *series of ribs surrounding* a standard; that, in the upper portion, there are two series of oppositely inclined braces hinged to the ribs in similar manner to what are called the double braces in complainant's patent; but I do not find in defendants' form either the sliding blocks f^1, f^2 or the rests h^1, h^2, elements of the combination recited in the said second claim, but on the contrary, in defendants' form the collar to which the upper end of the upper series of braces in hinged, instead of being the sliding block f^2 as required by the said second claim, is a collar fixed to the standard or shaft, without any capacity for being moved either up or down."

The ribs of the defendants' skirt form are not *specifically* the *individual ribs* of the complainant's patent, *but compose the same thing as the organized skirt form of the appellee.*

They are a little wider and therefore not so well suited to let each part of the framework be adjusted separately by the means shown in the other claims as are those in the drawings, because there are only four in the Knapp device, while there are eight in the Hall patent, but they sustain the dress and impart form to it and are capable of contraction and expansion radially from a central standard in precisely the same way.

The two are the same by whatever name they may be called. The double braces e^2, e^2 are found specifically in appellants' form. The ribs, standard and double braces admittedly being in appellants' form, the question of infringement, therefore, *depends wholly upon whether the appellants' form contains the sliding blocks f^2, f^2, and the rests h^2, h^2.*

SLIDING BLOCK f^2.

The expert for appellants says that their upper "collar, to which the upper end of the upper series of braces is hinged, instead of being the sliding block f^2, as required by the said second claim, is a collar *fixed* to the standard or shaft, without any capacity for being moved either up or down." (Record, p. 33; original, p. 56.)

If Mr. Earle means by *fixed* to the stantard, attached to it in such a way that it cannot be moved except as the standard itself is moved, he is mistaken, for the collar is *not fixedly* attached to the standard. It swivels upon it exactly as the Hall upper collar swivels on the Hall standard.

It is true that the blocks in the Hall patent are spoken of as *sliding* blocks, but they are not spoken of as blocks which slide or move *up or down on the standard*, though some of them can do so, and all might were it not for other devices shown in the patent. The expert for appellee says (Record, p. 15; original p. 29): "The patent nowhere sets out any object for moving the block f^2 up and down, or of changing the position of the rest or collar h^2. The only thing I can find in the patent which would lead Mr. Earle to think that the block f^2 must move up and down on the standard is because the patent calls it a *sliding* block; but I find that the patent uses the word '*slides*' in a rather unusual sense. For instance, it says in lines 48 and 49, p. 1, 'the block *f slides upon the rest or support h*.' This language clearly refers under the term 'slides' to the *rotary motion* of the dress form, instead of to a movement of the block *longitudinally* with the standard." They are spoken of as blocks which *slide upon the rests*, which is exactly what the block in question does, and what the appellants' upper collar does.

The *effect* of the language of the appellants' expert is that he finds one difference only between the block f^2 and appellants' upper collar; namely, that the latter has not a vertical adjustment upon the standard, while the former has.

As shown in the drawings, and as described in the specification, the block f^2 is *capable* of a vertical motion upon the standard as well as a rotary. That *possibility* of movement is however *immaterial, and is never used practically.* The rest above it as hereinafter shown under the heading "Rest h^2," is a fixed rest. That being so, the capability of vertical motion

is an entirely useless function, and one not intended to be given.

In practice when the form is in use and the elastic bands are in position, the block in question cannot fall. It is held up against the rest by their action.

The sole function of this block, in the style of form shown in the drawings, is to enable the skeleton frame to swivel upon the standard, so that the woman who is draping the dress may move the garment to and fro, instead of moving her seat.

It might be used to move up and down, and so assist in the contraction and expansion, were the rest above it also movable, but that is fixed. As it is, the upper collar of the appellants has exactly the functions of the upper collar of appellee.

REST h^2.

The last elements mentioned in the claim are the rests h^1, h^2. The specification says, beginning at line 68: "Rests h^1, h^2, *similar* to rest h, are placed above and below the sliding blocks." In the drawings the rests themselves appear to be exactly like the rest h. The rest h^2, however, does not have the same *means for fixing it to the standard* as the rest h. In the latter there is a thumb-screw so that the rest may be longitudinally adjusted upon the standard; but no such thumb-screw is shown in the rest h^2, and none is required, as that is a fixed rest or support used in common by both the bust and skirt portions.

The appellants' expert says that in the Hall patent there is a movable rest h^2, whose position is determined by a set-screw, while in appellants' device the rest is fastened to the standard by a pin.

But in the patent no mention is made of a set-screw for this rest, and none is shown in the drawings. That the specification and drawings are to be taken together is matter of well-known law.

It would do violence to the language and drawings of the patent to say that the upper rest h^2 was adjustable by a thumb-screw. It is not mentioned in the specification, it is not shown in the drawings, whereas every other similar rest requiring a set-screw exhibits it in section, and it is not even desirable to the operation of the patented device.

The double braces are placed at the hip. The contraction or enlargement there would be gained just as well by moving up

and down the rest h^1, which is shown in the drawing as movable, as by moving both rests, h^1 and h^2. The braces could and would be expanded or contracted equally well in either case. There was no object in having the upper rest adjustable; and to have made it adjustable would have interfered with a certain part of the plan of his invention which is shown in the patent. The specification says (Record, p. 28): "This pole or standard is designed to support an entire dress form, which is made, however, in *two distinct parts*, which I will designate as the 'skirt form' and 'waist form.' The principle of the invention is the same in both." The patentee proposes to have these two parts "*distinct*" in their action, even when used together as shown in the drawings. He has elsewhere in the patent (just before the first claim) stated that they may also be used separately. But his intention evidently is that even when used together the parts shall still be "*distinct*" in their operation, and that this is so is clear from an examination of the operation of the invention as described in the patent. For if h^2 is made adjustable and is moved either up or down, it is quite evident that both the waist and skirt *must* be adjusted thereby at the same time and in contrary directions. If h^2 is raised to its utmost limit, it will contract the hips so as to make the figure of a very thin person, and by the same movement the bust of the dress will be expanded to a size suitable for a very stout person. On the other hand, if the stout person wants a dress shaped on the dress form, and the rest h^2 is drawn down to suit her, and so drawn down as to bring the double braces close together, the waist will disappear and the bust be flattened to the appearance of an ironing board. In other words, if h^2 is movable, and is moved, the skirt form cannot be adjusted independently of the waist form. The motion will inevitably affect the size and shape of both forms. The forms will not then be "two distinct parts." They will have one part in common.

In speaking of the waist form and of adjusting that, it is also observable that the patent only speaks of the *neck* block or rest as adjustable.

He says, "push the waist form down until the sliding block p rests upon the rest h^2," as if the rest h^2 were a permanent fixture, "then with the neck block s press the sliding block p 'until the waist ribs have sufficiently spread, then set the screw

s'" which is the set-screw in the upper or neck rest s.

The purpose was clearly to have the waist and skirt form entirely "distinct" in their mode of adjustment, and this could not be so unless h^2 were a *fixed* and *permanent* object, and no person skilled in the art who should examine both specification and drawings could possibly be misled.

The appellants' expert does not contend that there is any difference between the upper rest of the appellants' form and the rest h^2 of the patent, except in his supposition of the vertical adjustment of the latter.

But even if the upper rest h^2 were provided with a thumb-screw to enable it to be fixed to the standard at different points, when so fixed it would not differ in any respect from the rest when pinned to the shaft. The character of the means by which the rest is fixed to the shaft does not alter the operation or effect of the mechanism of this claim. It is entirely immaterial to the primary object of the invention, which is to vary the angles of divergence of the double braces, and thus change the relative position of the ribs and the size of the form.

If the Knapps' position be correct, they could avoid infringement in using the patented device *specifically* by substituting a pin for a thumb-screw in the lower rest, and operating the upper one only. If such formal changes sufficiently change the character of a device to avoid infringement, there is no protection in Letters Patent.

We therefore think Mr. Shepard is clearly right when he says he finds the exact rest h^2 in defendants' device.

BLOCK f^1.

That the *lower collar in appellants' forms*, to which the lower set of the double braces is hinged, is the block or *collar f^1 of the appellee's patent*, would hardly seem to admit of argument; it has no difference in form or design, except the existence of a screw-thread upon the inside. Such a screw-thread would not affect, or in any way interfere, with the operation of the appellee's collar f^1. It would move longitudinally on the standard and rotate about it equally well with or without a screw-thread inside. The screw-thread of the appellants' block or collar is used to adapt it to the peculiarities of their rest, which is the other screw-thread on the standard. The addition of an immaterial feature cannot

constitute a difference in substance. The appellants' lower collar could be substituted for the appellee's block or collar f^1 without change of form, and would operate in exactly the same manner and accomplish exactly the same result.

REST h^1.

The appellants seem to lay the greatest stress upon the alleged difference between this element of the claim of the appellee's patent and the corresponding part of appellants' device. It is obvious that there is a formal difference between them. The appellee's rest consists of a collar which is adapted to be fixed to the standard at pleasure, for the purpose of *offering resistance at any point upon the standard against the downward movement of the lower collar* f^1. The appellants' rest consists of a screw-thread which is virtually a series of serrations *offering resistance at any point upon the standard against the downward movement of the lower collar*. In other words, the appellants substitute a series of fixed rests for the appellee's fixable rest. In the appellee's patent the rest h^1 holds the lower collar f^1 against downward movement upon the standard and permits the collar f^1 to slide upon it in order to enable a slight swivelling of the form. The same words describe the operation of the appellants' lower collar and rest.

EQUIVALENTS.

Are then the nut and screw-thread of appellants' form the equivalents of the block f^1 *and rest* h^1 *in the appellee's combination?*

The patentee does not claim any invention or novelty in the rest h^1 and block f^1 *per se*. They were in daily use at the time of his invention, and were as well known as the nut and screw. The Balch patent shows that precise device. The patentee first conceived the idea of an adjustable skirt form, and reduced it to the concrete thing by grouping together old and well-known mechanical parts and combining them with an expansible skirt structure. It would be a simple matter to find a great variety of mechanical devices that would perform the functions of the individual members of the complainant's invention.

By an equivalent is meant "that the ingredient substituted for the one withdrawn performs the same function as the

other, and that it was well known at the date of the patent securing the invention as a proper substitute for the one omitted in the patented combination."

Gill *v.* Wells, 22 Wall. 28.

It is not even necessary that the substituted device should be the same separately considered as the one specified in the claim.

"Though some of the corresponding parts of the machinery designated in this combination are not the same in point of form in the two bolting apparatuses, and separately considered could not be regarded as identical or conflicting, yet having the same purpose in the combination, and affecting that purpose in substantially the same manner, they are the equivalents of each other in that regard."

Cochrane *v.* Deaner, 94 U. S. 781.

In ascertaining the resemblances between mechanical parts it is necessary to look at the operative portions, and not attach too much importance to their details. The screw-thread of the appellants' form, so far as it operates as the rest, is a series of serrations or projections. Its effective character as a rest lies wholly in the projections upon the standard. It is the way they operate in the locality in which they are placed.

Our courts, in construing claims which *refer to the elements thereof by the letters in the drawings*, have given the same construction in applying the doctrine of equivalents as where the elements are referred to as *mechanism* or *suitable mechanism* for accomplishing a certain purpose. For the most a patentee is entitled to is the *mechanism* which he has described *or its equivalents*; and the fact that he has designated that mechanism by certain characters, such as letters on the drawings, certainly does not make it any less that mechanism.

If, instead of *inventing the first expansible form* for dress skirts, Mr. Hall had been the first to invent only a new combination of *old parts* which would simultaneously expand or contract the figure throughout the entire circumference, the appellee would even then be entitled to the equivalents of the parts enumerated in his claim.

Applying the law of equivalents, as above referred to, to the facts of this case, the object of complainant's invention, as has already been stated, is an adjustable and rotary skirt form.

To the accomplishment of this object three functions of the mechanism combined with the skirt form are necessary. It must be such as: —

First. — To enable the operator to raise or lower the collar which carries the inner ends of the lower double braces at his pleasure, so as to increase or decrease the angle of divergence of the braces, and thereby expand or contract the skirt form at will.

Second. — To enable him to hold the said collar or block in any desired position on the standard, when such position has once been gained.

Third. — To enable him to turn the skirt form about, or, in other words, to swivel it upon the standard so as to get at any part of the dress without moving.

This follows: —

(1.) Any collar, sleeve, block, or nut so arranged as to move up or down a shaft will perform the first function and will be an equivalent if it was so arranged and used for such purpose when the plaintiff took out his patent. The defendants use a threaded nut revolving on a screw-threaded shaft. The nut ascends and descends on the shaft at the will of the operator, carrying the inner ends of the lower double braces with it, increasing or diminishing their angle of divergence, and so expanding or contracting the skirt form. It does not move *directly* up and down, but *spirally;* but it *moves up and down.* How it does so is immaterial as to the function to be performed by it, and the inclined plane of the screw was an old and familiar mode of enabling the position of the collar to be changed longitudinally on a standard or shaft.

(2.) Any device which will hold the block or collar at any desired position on the standard, and which was a known means of thus detaining a sleeve, collar, or block upon a standard, will perform the second function, and will be an equivalent of the rest shown in the patent. The screw-thread performs precisely this function. When the nut reaches the right place, the operator ceases to move it and it stays where it is left by him, and it stays there because there is a "rest" for it, — something which keeps it from going farther; and that this was an old device everybody knows who has ever used a swivelling office chair.

Indeed a nut and screw-thread for this very purpose of moving a set of braces up and down upon a standard and keeping them in any desired position were in use prior to the Hall invention, and were well-known equivalents for a collar and set-screw, and are shown in both the Franke patents put in evidence by the appellants.

(3.) Any arrangement which enables the collar, block, or nut to "slide" upon the rest or revolve about it (for slide is used in this sense in the patent), and which had therefore been used for such a purpose, will perform the function of, and will be an equivalent for, the combination of the block and rest shown in the patent, inasmuch as it will enable the one to "slide" upon the other. That this result is obtained by appellants' device is apparent, and that it is an old way of doing it is well known.

The appellants, however, claim that when the Hall skeleton frame is swivelled about the standard, there is no contraction or expansion of the form, while in the Knapp form, if the frame is so swivelled, there is a change in the diameter of the figure, because such swivelling can only be effected by the motion of the nut on the screw-thread which changes the position of the nut on the standard.

Furthermore, the appellants say that if the Knapp is rotated without changing its diameter by swivelling standard and all in the foot in which the standard rests, as it may be, that such rotation is obtained by other means than those shown in the patent.

Therefore, they say, it is evident that the Knapp devices are not the equivalents of the Hall devices.

There are two answers to these claims:—

First.— Practically the only swivelling done upon a dress form is to rotate it very slightly back and forth so as to bring all parts of the garment it supports within sight or touch of the operator, without the necessity of requiring a change in her position. Now, when this is done with the Knapp device by moving the skeleton about the standard, although this produces a motion of the nut on the screw-thread of the standard, and so causes a theoretical and to a small extent an actual change in the diameter of the form, yet the thread is so slow, that in practice an entire revolution of the nut about the standard will effect so slight a vertical motion of the nut that

the change of diameter is not perceptible to the eye and is of no practical consequence.

De minimis non curat lex.

Second. The rotatory motion of the form caused by swivelling the standard in its socket is the exact and well-known equivalent of rotary motion obtained by swivelling the form upon the standard.

For example: Here is a wheel to which it is desired to give a rotary motion. A carriage wheel revolves upon its axle; a car wheel revolves, axle and all, in a bearing in which the axle turns. The one way is the equivalent of the other. Call the object to be turned a dress form instead of a wheel, and the two cases are exactly parallel. The only object of the collars is to let the form be swivelled, and the only object of the rests is to fix the position of the inner ends of the double braces adjustably upon the standard.

If the collars and the screw-threaded nuts and threaded standard were to be adopted with rests to which the inner ends could be attached, so made that one of them at least could be moved towards the other and adapted to be fastened adjustably to the standard by any method whatever, say a spring or a bolt, and then the standard were to be set in a base like that used by the Knapps, the invention of Hall would still be present, for the form would be swivelled and the positions of the inner ends of the double braces changed and fixed by well-known equivalents for those shown in the patent.

The question is, as was stated in Cochrane *v.* Deaner, *supra*, whether the parts of the device *operate* substantially the same in that device *as in the combination* of the claim, and not whether they are the same *separately considered* or the separate elements of the claim.

In construing a claim, whether to determine its scope, or for the purpose of ascertaining what are the essential features of the elements of the claim, or of determining if the elements of an alleged infringing device are equivalents, the Court will consider how those elements operate *in the combination*, without reference to their operation *apart from the combination and separately considered*, and will disregard all characteristics and qualities which do not take a part in performing the essential operations and purpose of the combination.

Cochrane *v.* Deaner, *supra.*

It is the mechanical action, etc., *in the combination* which is to be considered; not what other characteristics does it have which may or may not be of use in other respects, but what are its mechanical action, operation, and effect *in this combination*.

MECHANICAL CONSTRUCTION OF APPELLANTS' SEVERAL DEVICES.

The alleged infringing forms differ from each other somewhat in details of construction. They all possess, however, exactly the same means for connecting the double braces to the standard and adjusting them thereon. In each the inner ends of one series of the opposing braces are hinged or pivoted to a collar which is free to rotate upon the standard, but which is fixed against vertical movement thereon as set forth in the preceding discussion. The other set of the opposing braces is pivoted to a screw-threaded collar, or nut which is worked up and down by a screw-thread on the standard for the purpose of varying the distance between the inner ends of the two sets of braces, and thereby spreading or closing the form at will. In some instances the *upper* braces are hinged to the nut, and in others the *lower* set is hinged to the nut. No question, however, can arise as to the identity of these two arrangements. It is obviously immaterial which set of braces is moved and which is stationary, as the *sole object is to vary the distance between them*.

EXHIBIT BABY DRAPER.

The appellants have demonstrated in the device made by them and known as Exhibit Baby Draper that the invention specified in the second claim of the Hall patent constitutes an entire and useful dress form without the addition of other elements or features. This device enables us to see the invention of the second claim of that patent distinct from other features of a dress form, and to more clearly recognize it in machines where it is confused with other mechanism.

The Exhibit Baby Draper has a framework composed of wire strips connected together and corresponding in general shape to a short dress skirt which is adjustable radially in all

directions, and is expansible and contractible without impairing the symmetry of the figure. This framework is clearly the idea of the patentee. The framework of the patent has certain characteristics which are vital ones, such as its contour and capacity for varying size without varying shape. Any framework possessing these characteristics must be the ribs *c*. however different in its minor features. A great variety of material could be used and the strips could be arranged in many different designs in constructing a framework having these indispensable features, but they would all be essentially the "ribs *c*."

The central post wich is found in the Baby Draper has nothing to distinguish it materially from the standard *a* of the patent, and no contention can arise about it.

The expanding braces of the Exhibit Baby Draper are two series of oppositely inclined braces converging towards the ribs as shown in the patent and pivoted a short distance apart on the ribs at the hips in striking similarity in all their details to those in the patent, and there is no room for a difference of opinion as to their equivalency for the double braces e^2 of the patent.

The inder ends of the upper braces are pivoted to the rotary collar, and those of the lower set to the nut adjustable on the screw-thread on the standard as above described.

The Exhibit Baby Draper is therefore composed of nothing but the elements of the second claim of the patent. This exhibit is a complete answer to the contention of the appellants that a set of braces is required in addition to the double braces to make a useful form. This exhibit is a complete answer to the contention of the appellants that there is an entire independence of adjustment in the upper portion of the patented device. It is evident that no adjustment can take place there without affecting the entire framework, consequently the *independence of adjustment* of the different parts which Mr. Earle, the appellants' expert, thinks is the essence of the patent, but is absent in the alleged infringing devices, which absence he thinks shows that such devices do not infringe, and which he discusses at such length, is something which *could not possibly exist* in either the patented device or the dress forms made by the appellants, therefore we deem it unnecessary to reply to this part of their defence any further.

EXHIBIT DEFENDANTS' FORM C.

This form contains the same standard as the other alleged infringing forms; a framework composed of wire strips in every essential respect the same as the Exhibit Baby Draper, only larger; two sets of braces located at the hips, the upper of which has its inner ends pivoted to a rotary collar, and the lower of which has its inner ends pivoted to a nut operated by a screw-thread, as fully considered before. There is a single set of braces at the bottom of the framework which operate as stiffeners merely, and serve the same purpose as the single braces in the patent at the bottom of the framework. That these are simply desirable but unnecessary in the form C, or in the patent, is clearly shown by the testimony of the experts, and by the more striking demonstration shown by the Exhibit Baby Draper. There is no difference between the Exhibit C, and the Exhibit Baby Draper worthy of notice, except the arrangement of the double braces. In the former the double braces are pivoted together before they are pivoted to the framework, and one brace is shorter than the other. The braces, instead of inclining the one up and the other down towards the ribs, both incline down, but at different angles, so that they converge towards the framework. This convergence creates an opposition to each other, and operates to sustain the framework at any desired size against external pressure. This arrangement was most carefully considered by Judge Shipman on a motion for attachment for contempt, and his opinion (Record, p. 103; original p. 181) is a very clear exposition of the resemblance to the patented device and the equival nts therefor: —

"In the modified form of the defendants there is a series of braces which are hung by their inner ends to a screw-collar on the central standard, and, extending from the collar obliquely outward, are hinged to the ribs. Above the screw-collar is a second stationary collar, to which wire links or braces are hung, which, extending obliquely downward, but at a different angle from the members of the other series, are hinged to the braces of the other series midway of their length.

"The double braces of the Hall patent are, in fact, oppositely inclined to each other; and, by reason of this opposing action, the expansion is not like that of a Japanese umbrella, but the ribs continue substantially parallel with the standard, and the

expansion radiates in all directions. The sole question in regard to the modified form is whether its double braces have the opposite inclination to each other of the Hall braces. There is nothing in the claim or in the specification of the Hall patent which demands that the two sets of braces should continuously hang in absolutely different directions. If there was, the defendants' new form would not infringe, because its two sets of braces hang downwardly.

"It is necessary that the braces should oppose and control each other by opposing action, so as to compel radial expansion or contraction in all directions from the central standard. The two sets of the defendants' braces hang downward in the same general direction, but at different angles, and the difference in the angle is so great that the upper set always operates against and counteracts the movement of the lower set. The outer ends of each set cannot move 'towards or away from the standard without changing the distance between the inner ends,' and as this distance changes, radial expansion in all directions changes. The different sets of braces in the two forms perform the same function by the same mechanical means."

Two functions are performed by the double braces of the patent:—

1. They move the ribs to and from the standard.
2. They withstand external pressure at one point, and at that point prevent the ribs from being forced inwards.

One thing only is necessary in double braces, namely, that they be oppositely acting braces.

It matters not how long or short they are. They may be of unequal or of equal length. They may be pivoted directly to each other, or to the ribs near each other, or at a considerable distance from each other. They may meet at the point where they are pivoted to the ribs. They may be pivoted apart from each other and never meet. They may cross each other before they are attached to the ribs. One may be attached to the other, and then the second be attached to the rib. They may incline, both upwardly or downwardly, or one upwardly and one downwardly. They may be placed at any part of the dress form in which they are used, and their action will be the same in kind.

It is only necessary that the two sets of braces oppose each other in action.

DEFENDANTS' FORM B.

The standard and ribs or framework of this form are precisely the same as those of the Exhibit Defendants' Skirt Form. There is a set of double braces and collars and rests in every respect like those in the Exhibit Defendants' Form C, except that they are made of cast metal instead of wire. They are also placed upon the standard so that the positions of the collars are reversed, namely, the screw-threaded one is above and the other is below. The nut is run down on the standard to contract the form, and is run up to expand the form, operating precisely like those in Exhibit Form C when turned upside down. It requires no argument to demonstrate the identity of these two arrangements. The braces, instead of being connected with the ribs at the hip, are connected with them at the waistband. That this can make no difference in the operation and effect is plain on a mere inspection of the form. The ribs are rigid throughout their length, and may as well be hung on the double braces at one point as another. It would be better to attach them at some point above their centre to avoid the necessity of controlling the tendency to tip over, but with this qualification it is entirely immaterial at what point they are hung. They must be moved in and out by spreading and closing the braces, which is essentially all that is required. This enables the framework to be fixed at any adjustment. This being accomplished, the framework may be stiffened to a greater or less extent at different points throughout its length by single braces. When the diameter is established at any one point by double braces, the unsteadiness of the form can be overcome by single braces, which is all that is left to be done. This is not necessary even as shown by the Exhibit Baby Draper, but is convenient and helpful. We have therefore in the Exhibit Defendants' Form B the same standard and ribs as are contained in Exhibit Defendants' Skirt Form, the same double braces, collars, and rests as contained in Exhibit Defendants' Form C, and the braces are located at the waistband as in the original Exhibit Defendants' Skirt Form.

DEFENDANTS' FORM A.

This article is a fac-simile in external appearance of the Exhibit "Defendants' Complete Dress Form," that is to say, it is

divided into four quarter sections, and corresponds to an entire dress. Each section is rigid from top to bottom, that is, from the neckband to the bottom of the skirt, so that the movement of any portion involves a movement of the whole. In this exhibit, the quarter sections are hung upon the outer ends of double braces exactly like those in the Exhibit Defendants' Form B. They differ in no respect except in their location. Instead of being at the waistband as in Exhibit B, they are located at the neckband. In each case they are located at the extreme upper ends of the quarter sections, which in the case of Exhibit B constitute a skirt form only, while in Exhibit A they constitute a skirt form plus a waist form. In practical operation it is the same as if the waistband of Exhibit B were prolonged to the height of the bust portion. The bust portion is integral with the skirt portion, and mechanically they are one and the same.

We have therefore precisely the same standard, the same double braces and collars as are contained in Exhibit Defendants' Form B. We have the same quarter sections that are found in the Exhibit Defendants' Form B, increased in length. The double braces are connected at the extreme upper ends of the ribs. There is only a change of location of double braces, because the ribs are increased in length.

Certain experiments with the Exhibit Defendants' Form A show conclusively that it contains the double braces of the patent, namely: —

1. Take Form A and Form B. Either can be adjusted as well as the other. Remove the braces at the waistband entirely from the Form A. It can be still as readily expanded and contracted as when they were present.

This proves that the single set of braces at the waistband are not essential to the adjustment of the hip portion of the dress form. It can be adjusted just as well without them as with them. They can perform no other service than that of stiffeners.

2. Remove both the "double braces" and the "skirt braces" from Form A, leaving the waist braces alone. It is apparent that now it cannot be adjusted at all. The "single set of braces" at the waistband have no effect whatever to expand or contract the form.

3. Remove the "double braces" and the "waist braces,"

leaving only the "skirt braces." The form cannot be adjusted.

4. Remove the double braces, leaving the waistband braces and the skirt braces. There can be a partial but imperfect adjustment at the hip, and none whatever at the lower part of the form.

5. The second, third, and fourth experiments appear to show that there can be no proper adjustment without the double braces. But if it is thought that these experiments only show that there must be some *upper* braces, but not necessarily that these must be *double* braces, then remove one branch of the double braces, leaving single braces only on the form. It will then be seen that the form can only be partially adjusted at the hips and not at all at the bottom, and that the whole figure is unstable, loose, and rickety. It is not a practical dress form. It cannot be held firmly at any given size. The double braces lock the figure and hold it. When these are absent, there is nothing to hold it, and a slight pressure will throw it out of position. The double braces are *absolutely essential* to enable it to do the service for which it is designed.

6. Leaving out the "waistband" braces, move the "double braces" at will up and down the standard. It will be seen that wherever the double braces are placed the figure can be adjusted, provided they are placed somewhere on the standard and connecting with the ribs.

These facts seen by the eye show conclusively that the double braces act as they do in the patent in suit.

We have then in the Form A all the elements of the second claim and in the same combination.

PROFITS AND DAMAGES.

The master found and allowed profits and damages only on the sales of the skirt forms; and while the appellee thought and still thinks that both profits and damages should have been found and allowed by reason of the manufacture and sale of the complete forms composed both of waist and skirt, yet he has not appealed from the decision of the Circuit Court, and the point is not open to him here.

The questions of profits and damages are therefore confined to the skirt forms only; namely, Exhibits Defendants' Skirt

Form, Exhibit B, Exhibit C, and Baby Draper, in each of which the second claim of the patent in suit is embodied.

PROFITS.

The master was right, and the Court was right in sustaining him, in the point that the Hall dress form was a new article, having a new and distinct character of its own, and differing essentially from either dummies or from such forms as the Everett.

The Court was also correct in finding with the master that it was the invention of said second claim which gave to the defendants' skirt form its value as a marketable article and sold it in the market. "Of the truth of this finding," says Judge Shipman, "there can be no doubt. The second claim contained the entire skirt form." . . . . (Record p. 385; original pp. 583, 584.)

Mr. Coleman says that if a single one of the five elements of the plaintiff's second claim were removed from defendants' form, the form would be worthless, both practically and commercially.

Dep. Coleman, Record, p. 325, Ints. 7–11; p. 329, Ints. 22–26.

Mr. C. A. Morss testifies on this point, Record, p. 302, Ints. 10–14.

Mr. Cram testifies to the comparative value of means for operating adjusting devices, and the adjusting devices themselves, Record, p. 306, Ints. 21–24.

Mr. R. R. Appleton testifies to the same point as Mr. Cram (p. 352, Ints. 18–24).

Mr. Ufford says that the entire value of the defendants' forms is due to their adjustability to all sizes (p. 222, Ints. 21–23).

And Mr. Norris testifies that the newer extending figures (Knapp and Hall) fairly drove the Everett out of the market. (Record, p. 322, Ints. 51, 52). "Absolute necessity led to the invention of the Peerless" (p. 346, Int. 72).

Each of defendants' skirts is the Hall invention, pure and simple. There is the expansible frame, which was new with Hall, and which was defined in his second claim as rib *c*. No patent prior to Hall's showed a skirt frame expansible without

change of shape. There are the double braces, which are sufficient alone to support and operate the entire frame, and expand it radially from the standard. This is shown by the Exhibit Baby Draper. These double braces are the double braces e^2, e^2 of the second claim. The threaded standard and the nut are the substitutes for the slide f^1 and rest h^1 of the second claim. They are not additions to complainant's device, but they are mere substitutes, and are his property converted into another form, well known before the patent. The upper collar and rest of the defendants' form are the same forms in which the patent shows the slide f^2 and rest h^2. The standard in defendants' skirt has an enlargement, or knob, at the top by which to rotate it and raise the slide or nut, instead of raising it by applying the hand directly and pushing it up, as in the patent.

The Baby Draper, therefore, contains nothing but the elements of the second claim, and shows that nothing is essential to skirt forms but those. It is, therefore, more accurate to say that it is the device of the second claim, than that it *contains* it. The other skirt forms made by defendants are practically the same as the Baby Draper, except that a set of braces are added as mere stiffeners at the bottom of the skirt. This set is a mere duplication of the single braces which make up the double braces, and operate the same. They are not essential, and it is simply another way of embodying the invention to which the complainant is entitled. It illustrates the province of the mechanic in selecting means for adapting an invention to practical uses. It is also one way to use the invention pointed out by the patent. The drawings show a set of braces or stiffeners at the bottom, which are duplicates of the lower series of the double braces. The distance from the bottom of the skirt at which the double braces are pivoted to the ribs determines in a measure the number of sets of single braces or stiffeners to use. In Form A, where the double braces are located at the extreme upper end or neck portion, it is considered advisable to use two series of single braces or stiffeners, one at the waistband and one below. It is advisable to use both, but one set of stiffeners would operate about as well, and none are absolutely necessary even in this extreme case.

It is entirely evident, apart from the testimony of any wit-

ness, upon mere inspection of defendants' figure and the comparison of it with the said second claim, that if the elements of that claim are removed the *whole* is removed; for with standard, ribs, double braces, rests, slides, or their equivalents gone, there is nothing left, except, perhaps, a knob and some useless stiffeners.

The evidence therefore justified the master and the Court in finding that the entire profits made by the appellants must be accounted for.

Where the invention, as in this case, covers the entire machine, so that the article would be commercially valueless or would not exist without it, the measure of accountability is the total profit made by the infringer or lost by the patentee.

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Hall's invention could not have been put into any previously existing machine. It was not an improvement in dress forms he made, but an improved dress form, just as in Manufacturing Co. *v.* Cowing, 105 U. S. 255: "While nominally he only made an improvement in pumps, he actually made an improved pump."

The slightly higher prices at which the Knapps are said by the master to have sold their forms do not in any manner show that the so-called improvements added to the price. It is an apparent rather than an actual increase of price caused by the master's not discriminating between prices charged by manufacturers, jobbers, and retail dealers. The retail price charged for both the appellee's and the appellants' skirt forms were the same till at a late period, when appellants reduced it. Mr. Morss made skirt forms with two kinds of posts, wood and iron. The appellants' forms had iron posts only. The retail price of the Morss forms was for skirts with iron posts, $3.50; and with wood posts, $3. (Record, p. 299, Int. 44. The appellants, so far as the record appears, sold their skirt forms like Exhibit C at $3 at retail. (Record, p. 351, Ints. 8 and 9.) The retail price of other skirt forms of defendants is not in evidence. So far, then, as retail price is concerned, the Hall forms actually sold for more than the Knapp forms, because the iron-post Hall form sold for $3.50 and Knapp's at only $3,

and even the wood-post Hall form sold as high as the iron-post Knapp form.

The wholesale price of Hall's iron-post skirt was $30 per dozen. The wholesale price of Knapp's iron-post skirt was also $30. The wholesale price of Hall's wood-post skirt was $24 per dozen. (Record, p. 299, Int. 44.)

The difference, however, to which the master alludes, is a difference in wholesale price which grows out of the fact that Mr. Morss in some cases did not act as jobber of his own goods. He manufactured and sold them at wholesale list prices, twenty-five per cent off, to Messrs. Appleton, of New York, and Bowen, of Providence, who acted as jobbers and sold to dealers at the list wholesale prices without discrimination. Therefore, in such cases, the prices received by plaintiff were for iron-post skirts $30 per dozen, less 25 per cent, equal to $22.50, and for wood-post skirts $24 per dozen, less 25 per cent, equal to $18 per dozen. (Record, p. 299, Cross-int. 44–48.) The Hall Bazar Form Co., spoken of in answer to Cross-int. 45, is R. R. Appleton, who carried on business under that name.

The appellants, on the contrary, acted as their own jobbers, and sold only at wholesale, with no discounts, to all dealers at the same prices. (Record, p. 141, Ints. 83–86.)

And the same is true of the complete figures. The retail price of the appellee was $6.50. There is no evidence of the retail price of the appellants' complete form. The wholesale price charged by appellee when he acted as jobber as well as manufacturer was $54 per dozen. (Record, p. 299, 300, Cross-int. 45.) The wholesale price charged by appellants, who always acted as their own jobbers, was $48 per dozen (see their reports Record, p. 358). The wholesale price charged by appellant when he acted as manufacturer only, and not as jobber, was $54, less 25 per cent, equal to $40.50. (Record, p. 299, Cross-int. 45, 46.)

Therefore the master's statement of comparative prices, though true in fact and not subject to exception, does not institute a legitimate comparison.

It is, therefore, entirely clear that the difference of prices, such as they were, between appellants' and appellee's form, were not due to differences of construction.

Mr. Morss's retail price for skirts with iron posts was $3.50 each, and for skirts with wood posts, $3. (Record, p. 299, Int. 44; p. 351, Ints. 8–10.) The defendants' was $3 at first and

afterwards $2.50 (p. 351, Ints. 8, 9). The wholesale price of the plaintiff's iron-post skirt form was $30 per dozen, and of skirts with wood posts, $24 a dozen.

Everett Morss, Record, p. 167, Int. 11; p. 110, Int. 7.
C. A. Morss, Record, p. 123, Ints. 61, 62, and 63.
P. 299, Ints. 44–48.

The wholesale price of appellants' skirt forms, all of which had iron posts, was also $2.50 apiece, or $30 a dozen (see their statement, p. 358), and later $24 a dozen (p. 351, Ints. 8 and 9).

But the appellee and the appellants adopted different modes of putting their forms in the market. The appellee sought to avoid making direct sales to dealers, and employed jobbers, Mr. Appleton in New York, and Mr. Bowen in New England, and some others, to whom he gave discounts (p. 299, Int. 45). The appellants acted as their own jobbers, and sold at the same prices to everybody who was a dealer, whether large or small. So that while the public paid the same prices, buying at retail, and so far as it appears the small dealers paid the same price for both appellee's and appellants' forms, the appellee did, on the whole, receive less money per form. But it was not on account of any advantage or greater value that the appellants received more per form than the plaintiff, but because the appellants were both manufacturers and jobbers, while the appellee was a manufacturer only.

Nor can the appellants diminish the profits by reason of their addition of an adjusting device, even if that was really an advantage, since they have failed to show that such additions contributed to the profits realized.

"The Nicholson pavement was a complete thing, consisting of a certain combination of elements. The defendants used it as such, the whole of it. If they superadded the addition made to it by Brockleband and Trainer, they failed to show that such addition contributed to the profits realized. The burden of proof was on them to do this."

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Nor can the appellants compare the Hall device with the Everett or Diamond, and claim that their existence may in some manner diminish the profits they are obliged to account

for on the ground that they might have used these forms, though both, by the way, were patented and inaccessible to the public ; nor can they compare them with solid forms and claim that they might have used them, and so diminish the amount of profits they are to account for.

"Equally without foundation is the position taken by the appellants, that other pavements approaching in resemblance to that of Nicholson, were open to the public, and that the specific difference between these pavements and Nicholson's was small, and that, therefore, the Nicholson pavement was entitled to only a small portion of the profits realized. Nicholson's pavement, as before said, was a complete combination in itself, differing from every other pavement. The parts were so correlated to each other, from bottom to top, that it required them all, put together as he put them, to make the complete whole, and to produce the desired result. . . . Thus combined and arranged they made a new thing like a new chemical compound. It was this thing, and not another, that the people wanted and required. It was this that the appellants used, and by using made their profits, and prevented the appellee from making it."

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The findings of the master and of the Court as to profits were correct.

DAMAGES.

Our claim was, that we were entitled to what profits we should have made by the sale of all the forms appellants have sold, which we should have sold ourselves if the appellants had not been in the market.

Mr. Morss was prepared to furnish the market with all it could take at any time, as he testifies.

Record, p. 296, Ints. 7–9.

Would those who bought the Knapp have taken the Hall, had the Knapp not been in the market?

This is a fact which the appellee was to establish as he would any other fact, by a reasonable perponderance of evidence.

He was not bound to establish it by mathematical demonstration. In its nature it was not susceptible of such demonstration. It is hypothetical, and deals with probabilities.

The master was justified in finding that the appellee lost the sales of skirt forms sold by the appellants *to the appellee's former customers.*

The Everett form was not in the market as a competitor. It was a practically solid figure.

Nor was the Diamond, which is not noticed in the master's report or in the opinion of the Court, but about which some evidence was taken before the master, a competitor with either Hall or Knapp.

The Diamond form began to be manufactured as far as appears by the evidence in October, 1882. (Record, p. 274, Int. 52.)

Mr. C. A. Morss says there was but little competition between that and the Hall, because it was sold largely on the instalment plan; that in Boston he had only seen it in two places, the largest of which was Ufford's. (Record, p. 118, Ints. 19, 20.)

Mr. Ufford says he sold "a few, a very few of the Diamond."

Record, p. 221, Int. 2.

Mr. R. R. Appleton says the sales of the Diamond are almost entirely confined to the instalment channel of trade.

Record, p. 149, Int. 28.

That it is so confined to this branch of trade is not denied by the appellants, and no attempt was made to deny it, although Mr. Manchester, the manufacturer, and Mr. Cram, the selling agent, were both on the stand. Mr. Manchester says it was kept on sale and sold extensively (p. 273, Ints. 49, 50), but does not deny it was sold substantially on the instalment plan.

Mr. Cram, while also stating that the Diamond form was confined almost exclusively to the dry-goods trade and the retail trade (p. 306, Ints. 17–20; p. 310, Int. 55), did not deny that the sales were effected substantially by instalments.

Mr. Cram did say, however, that by reason of the different channels of trade, the Diamond and the Knapp had not been competitors.

Record, p. 306, Ints. 17–20; p. 310, Int. 55.

If, then, the Diamond was not a competitor with the Knapp, it is quite certain that the sales made by Knapp would not

have been made of the Diamond, if the two were not in competition.

No evidence is anywhere offered by defendants that the Hall and Diamond were competitors, except that in a few instances, and as to how many they were Mr. Manchester could form no idea; some people who bought the Hall for some reason desired to and did exchange them for the Diamond.

It is not denied that the Diamond form might have been so handled as to come into competition with both the Knapp and the Hall; but the practical consideration is that it did not do so, and that, therefore, for the purposes of this hearing, is as if such form had never existed.

We are not obliged to refute all speculative theories.

It is enough to show that the existence of the Diamond did not affect the sales of the Knapp or Hall form to any practical extent.

Mr. Marvin, who had the witnesses before him, was especially able to judge of the reliability, scope, and weight of their testimony.

It may be objected that Morss sued the Diamond form and has now bought it. That is true. If he had prevailed in his bill in equity, he would have recovered whatever profits the Diamond had made, on familiar principles; but he could not have recovered damages, as he could have shown none as distinguished from his profits. And by his purchase of the Diamond, he was enabled to enter, without fear of its competition, a field of sale which was practically closed to him.

Another thing which shows that the Knapps have injured Morss by selling forms to persons who would otherwise have bought the Hall is that they have followed in his steps, adopted the same methods of sale, and sold to those who had already been Mr. Morss's customers.

Mr. Morss spent two years' time and a great deal of money in introducing the Hall form before 1884. He took it two years before that time, when it was almost no business at all. He used agents, circulars, and newspaper advertisements. He introduced them (*i. e.*, the forms) "largely through the paper pattern agency, more so than in any other one way; also largely to sewing-machine companies."

Record, p. 118, Ints. 21–23.

And this method of sale was continued by Mr. Appleton when he became the general selling agent about January, 1885.

Record, p. 149, Ints. 28, 29.

Mr. Morss's methods of sale were adopted by the Knapps. They followed his lines of trade, and got the benefit of the time and money he had spent in establishing his agents and business, and sought his customers.

Record, p. 119, Ints. 25, 26.
Record, p. 149, Int. 28.
Record, p. 147, Int. 13.

And sold them to many of Mr. Morss's former customers, whose names were given by Mr. Morss and Mr. Appleton.

Record, p. 119, Int. 24.
Record, p. 196, Ints. 21, 22.
Record, p. 203, Int. 83.

Out of 3,364 complete dress forms and 2,628 skirt forms reported on p. 358 as sold during the period of the equity accounting up to the time of said report, there were sold 3,021 complete forms and 2,325 skirt forms to the following persons, whom Mr. Morss and his agents have testified were Mr. Morss's former customers, namely, Domestic Sewing Machine Co., H. Bristow, Wannamaker & Co., Ufford & Son, J. G. Blaisdell, W. G. Browne & Co., Edward Ridley & Sons, Ehrich Bros., H. Rausch, Demorest Fashion and Sewing Machine Co., William Soll, Fletcher & Swart, E. B. Jordan, Rechel, C. F. Fiske, M. A. Laft, S. Oppenheimer & Bro., Brown O'Conner; and it will be noticed that Mr. Appleton, in Int. 83, on p. 203, did not include the names of some persons who, in answer to Int. 33, on p. 197, he had said had once sold the Hall form and had now wholly or partly abandoned it because better terms could be got of the Knapps. The houses at Chicago and Indianapolis are illustrations of these omissions.

This same proportion of sales to these customers of the appellee holds good throughout the whole period of the three cases.

Record, p. 107, Int. 8.
Record, p. 117, Ints. 31, 32.

As to the sales reported under head of A, B, and C, out of

1,790 complete forms all but 73, and out of 6,019 skirt form all but 1,183, were sold to these same old customers.

And doubtless many of the other customers were former customers of the appellee, obtained at a later period, but before the appellants sold to them, and whom the appellants sought after the Domestic Sewing Machine Company had been enjoined.

The Hall form was favorably received in the market. This is shown by its large sale in spite of Knapp's competition. It is as certain as anything can be that these former customers of the appellee would have continued to buy of him had not Knapp interfered. *Not one was called by the appellants to show that he would not, or that there was any reason why he should not, have bought the Hall if the Knapp had not been in the market.*

And it may be noted that every wtness who testified for the appellants was at the time of testifying either a defendant in a suit on this patent, or an employee of such defendants.

So the master was entirely justified in finding that the appellee was actually and really deprived by the appellants at least of the sales made by appellants to the former customers of the appellee.

And this is as far as the master has gone. He has found damages only *as to the sales to such former customers.*

And in estimating our damages upon the profits we should have made on the sales of skirt forms of which we were deprived by the wrongful acts of the appellants, the master and Court were correct in including all profits we should have made upon such forms, whether derived from the contested invention or not. It is quite immaterial whether we did or did not make such forms partly under other claims and other patents than the second claim of the patent in suit.

The plaintiff is to be given damages the defendants caused him. Now, if the defendants, by the sale of an infringing form, deprived the plaintiff of the sale of one of his forms, it is clear that what the defendants deprived the plaintiff of was the profit he would have got from the sale of the form he did not sell, from whatever source these profits were derived. The rule as to a patent for an improvement upon an existing machine does not apply. The plaintiff had invented a new

article; he had made, not an "improvement in dress forms," but an "improved dress form." The entire value of the form as a marketable article was due to the invention described in the second claim of the patent in suit, and the entire profits plaintiff lost by defendants' act constitutes his damages.

And it is in evidence that the entire commercial, as well as practical value of plaintiff's form, as well as defendants' form, was due to the said second claim.

Coleman, p. 329, Ints. 18–25.

This evidence is not controverted or denied.

The Court is also justified upon the evidence in sustaining the position of the master with regard to the proportion which skirt forms with iron standards would have borne to skirt forms with wooden standards, in such lost sales.

Everett Morss, p. 167, Int. 10.

And it was a fair inference that of the sales the plaintiff lost by reason of the defendants' infringement, at least five ninths would have been of iron-post skirts.

1. Because there is no reason shown why the usual presumption that things will continue to be as they have been should be disregarded; and,

2. Because all the displacing skirt forms had iron posts, and the inference might fairly even be that *all* the skirt forms plaintiff would have sold if defendants had not infringed would have been of iron, rather than that only five ninths would have been of iron.

In view of the wilful acts of the Knapps referred to in the opinion, the increase of damages was justified.

The decree of the Circuit Court should be affirmed.

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